TOSHIBA

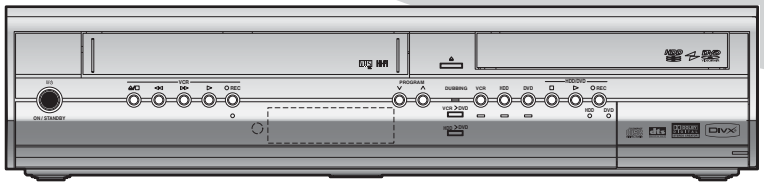
FILE NO. 810-200662GR

REVISED: 03

# SERVICE MANUAL

# HDD & DVD / Video Cassette Recorder

# RD-XV45KE
# RD-XV45KB
# RD-XV45KF



The above models are classified as green products (*1), as indicated by the underlined serial numbers. This Service Manual describes replacement parts for the green products. When repairing these green product(s), use the part(s) described in this manual and lead-free solder (*2).

For (*1) and (*2), see the next page.

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## (*1) GREEN PRODUCT PROCUREMENT

The EC is actively promoting the WEEE & RoHS Directives that define standards for recycling and reuse of Waste Electrical and Electronic Equipment and for the Restriction of the use of certain Hazardous Substances. From July 1, 2006, the RoHS Directive will prohibit any marketing of new products containing the restricted substances.

Increasing attention is given to issues related to the global environmental. Toshiba Corporation recognizes environmental protection as a key management tasks, and is doing its utmost to enhance and improve the quality and scope of its environmental activities. In line with this, Toshiba proactively promotes Green Procurement, and seeks to purchase and use products, parts and materials that have low environmental impacts.

Green procurement of parts is not only confined to manufacture. The same green parts used in manufacture must also be used as replacement parts.

## (*2) LEAD-FREE SOLDER

This product is manufactured using lead-free solder as a part of a movement within the consumer products industry at large to be environmentally responsible. Lead-free solder must be used in the servicing and repair of this product.

### WARNING

**This product is manufactured using lead free solder.**

**DO NOT USE LEAD BASED SOLDER TO REPAIR THIS PRODUCT !**

The melting temperature of lead-free solder is higher than that of leaded solder by 86°F to 104°F (30°C to 40°C). Use of a soldering iron designed for lead-based solders to repair product made with lead-free solder may result in damage to the component and or BOARD being soldered. Great care should be made to ensure high-quality soldering when servicing this product — especially when soldering large components, through-hole pins, and on BOARDs — as the level of heat required to melt lead-free solder is high.

# MAIN SECTION

# HDD & DVD / Video Cassette Recorder

# RD-XV45KE/RD-XV45KB/RD-XV45KF

**Main Section**
- **Specifications**
- **Preparation for Servicing**
- **Adjustment Procedures**
- **Schematic Diagrams**
- **BOARD's**
- **Exploded Views**
- **Parts List**

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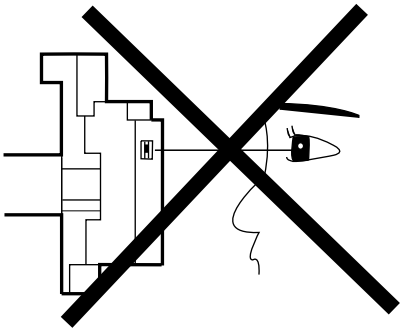
# SPECIFICATIONS

| | |
|---|---|
| **General** | |
| System | HDD, DVD-Video, DVD-RW/R, VCD, CD-DA, CD-RW/R, Video Cassette Tape |
| VCR Video Heads | Four heads |
| HDD | Internal 3.5 inch HDD 160 GB |
| Power requirements | 220–240V ~ ± 10%, 50Hz ± 0.5% |
| Power consumption | 60W (standby: 8.5W) |
| Weight | 5.8kg |
| Dimensions (width x height x depth) | 435 x 99.5 x 380mm |
| Operating temperature | 5°C to 40°C |
| Operating humidity | Less than 80% (no condensation) |
| TV format | PAL BG / DK + SECAM BG / DK (RD-XV45KE)<br>PAL - I (RD-XV45KB)<br>SECAM LL , PAL B / G (RD-XV45KF) |
| **Recording** | |
| Recording format | Video Recording format (DVD-RW only),<br>Video format (DVD-RW, DVD-R) |
| Recordable discs | DVD-Rewritable, DVD-Recordable |
| Video recording format<br>Sampling frequency<br>Compression format | <br>13.5MHz<br>MPEG |
| Audio recording format<br>Sampling frequency<br>Compression format | <br>48kHz<br>Dolby Digital |
| **Tuner** | |
| Receivable channels | E2 - E69 (RD-XV45KE)<br>IRA - E69 (RD-XV45KB)<br>"L(SECAM L)" F1 - E69 (RD-XV45KF)<br>"BG(PAL B / G )" E2 - E69 (RD-XV45KF) |
| **Input/Output** | |
| Front Panel : (AV3) | |
| Video input<br>Input level | One RCA connector<br>1Vp-p (75 Ω) |
| S-Video input<br>Input level | One Mini DIN 4-pin jack<br>Y (luminance) 1Vp-p (75 Ω)<br>C (colour) 300mVp-p (75 Ω) |
| Audio input<br>Input level : | Two RCA connectors<br>2Vrms (Input impedance: more than 10k Ω) |
| Rear Panel | |
| VHF/UHF antenna input/output terminal | VHF/UHF set 75 Ω |
| Audio input /output | Two 21-pin scart jack (AV1, AV2) |
| Video input /output<br>Input /output level : 1Vp-p (75 | Two 21-pin scart jack (AV1, AV2)<br>1Vp-p (75 Ω) each |
| S-Video output<br>Input /output level | One Mini DIN 4-pin jacks<br>Y (luminance) 1Vp-p (75 Ω)<br>C (colour) 300mVp-p (75 Ω) |
| Audio output<br>Output level | Two RCA connectors<br>2Vrms (Output impedance: ≃ 680 Ω) |
| Digital audio output<br>Output level | One Coaxial pin jack<br>500mVp-p (75 Ω) |

Note
The specifications and design of this unit are subject to change without notice.

# LASER BEAM SAFETY PRECAUTIONS

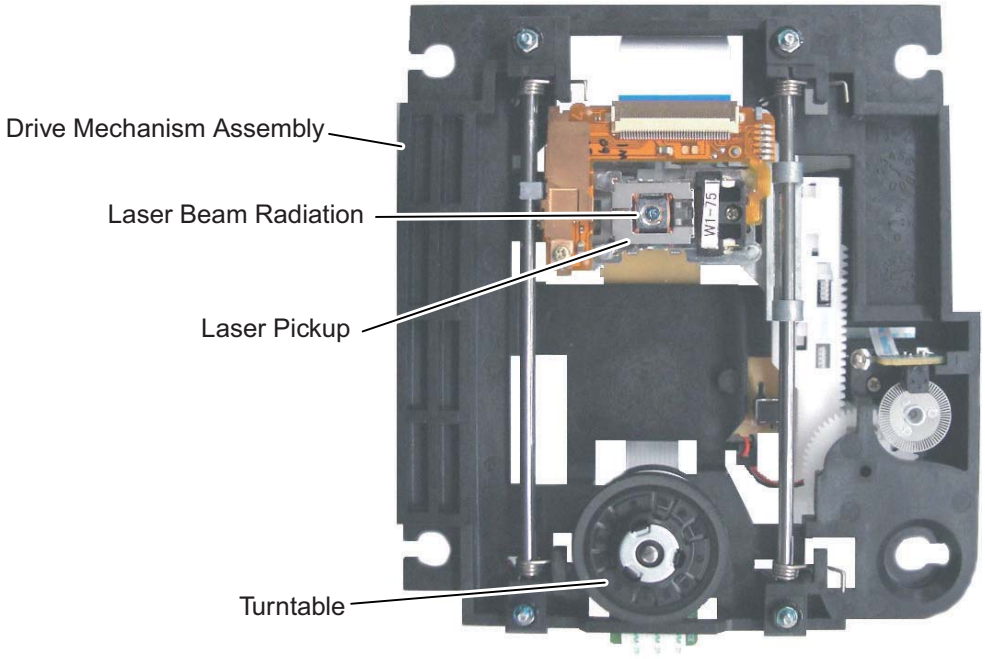
This DVD player uses a pickup that emits a laser beam.

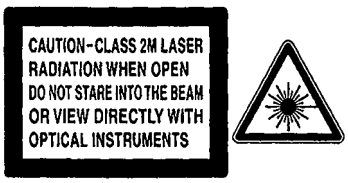


**Do not look directly at the laser beam coming from the pickup or allow it to strike against your skin.**

The laser beam is emitted from the location shown in the figure. When checking the laser diode, be sure to keep your eyes at least 30 cm away from the pickup lens when the diode is turned on. Do not look directly at the laser beam.

**CAUTION:** Use of controls and adjustments, or doing procedures other than those specified herein, may result in hazardous radiation exposure.




**Location: Inside Top of DVD mechanism.**

# IMPORTANT SAFETY PRECAUTIONS

## Product Safety Notice

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection, nor can the protection they give necessarily be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by a ⚠ on schematics and in parts lists. Use of a substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire, and/or other hazards. The Product's Safety is under review continuously and new instructions are issued whenever appropriate. Prior to shipment from the factory, our products are carefully inspected to confirm with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

## Precautions during Servicing

**A.** Parts identified by the ⚠ symbol are critical for safety. Replace only with part number specified.

**B.** In addition to safety, other parts and assemblies are specified for conformance with regulations applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, RF cables, noise blocking capacitors, and noise blocking filters, etc.

**C.** Use specified internal wiring. Note especially:

1)Wires covered with PVC tubing

2)Double insulated wires

3)High voltage leads

**D.** Use specified insulating materials for hazardous live parts. Note especially:

1)Insulation tape

2)PVC tubing

3)Spacers

4)Insulators for transistors

**E.** When replacing AC primary side components (transformers, power cord, etc.), wrap ends of wires securely about the terminals before soldering.

**F.** Observe that the wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).

**G.** Check that replaced wires do not contact sharp edges or pointed parts.

**H.** When a power cord has been replaced, check that 5 - 6 kg of force in any direction will not loosen it.

**I.** Also check areas surrounding repaired locations.

**J.** Be careful that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

**K.** Crimp type wire connector
The power transformer uses crimp type connectors which connect the power cord and the primary side of the transformer. When replacing the transformer, follow these steps carefully and precisely to prevent shock hazards.
Replacement procedure

1)Remove the old connector by cutting the wires at a point close to the connector.
**Important:** Do not re-use a connector. (Discard it.)

2)Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

3)Align the lengths of the wires to be connected. Insert the wires fully into the connector.

4)Use a crimping tool to crimp the metal sleeve at its center. Be sure to crimp fully to the complete closure of the tool.

**L.** When connecting or disconnecting the internal connectors, first, disconnect the AC plug from the AC outlet.

# Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts, and wires have been returned to their original positions. Afterwards, do the following tests and confirm the specified values to verify compliance with safety standards.

## 1. Clearance Distance

When replacing primary circuit components, confirm specified clearance distance (d) and (d') between soldered terminals, and between terminals and surrounding metallic parts. (See Fig. 1)

**Table 1 : Ratings for selected area**

| AC Line Voltage | Clearance Distance (d), (d') |
|---|---|
| 220 to 240 V | ≥ 3 mm(d)<br>≥ 6 mm(d') |

**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

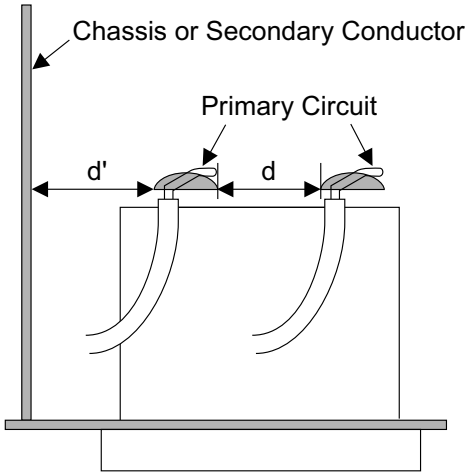



**Fig. 1**

## 2. Leakage Current Test

Confirm the specified (or lower) leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.) is lower than or equal to the specified value in the table below.

**Measuring Method (Power ON) :**

Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across the terminals of load Z. See Fig. 2 and the following table.

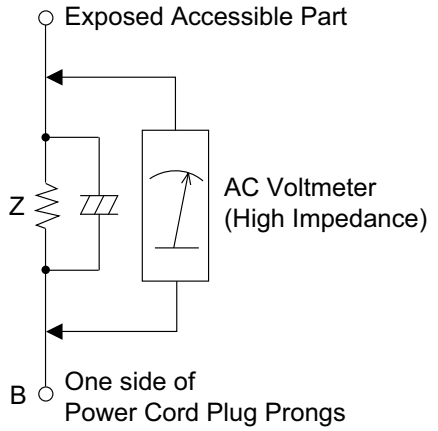



**Fig. 2**

**Table 2: Leakage current ratings for selected areas**

| AC Line Voltage | Load Z | Leakage Current (i) | One side of power cord plug prongs (B) to: |
|---|---|---|---|
| 220 to 240 V | 2kΩ RES. Connected in parallel | i≤0.7mA AC Peak<br>i≤2mA DC | RF or Antenna terminals |
| | 50kΩ RES. Connected in parallel | i≤0.7mA AC Peak<br>i≤2mA DC | A/V Input, Output |

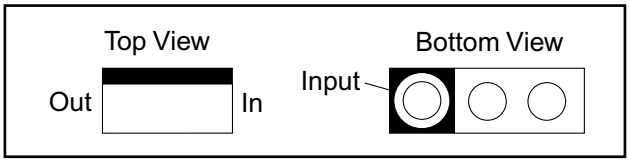
**Note:** This table is unofficial and for reference only. Be sure to confirm the precise values.

# STANDARD NOTES FOR SERVICING

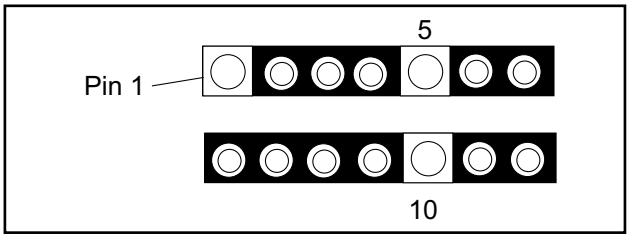
**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

## Circuit Board Indications

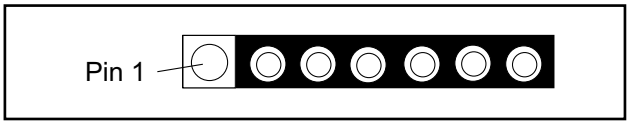
1. The output pin of the 3 pin Regulator ICs is indicated as shown.




2. For other ICs, pin 1 and every fifth pin are indicated as shown.

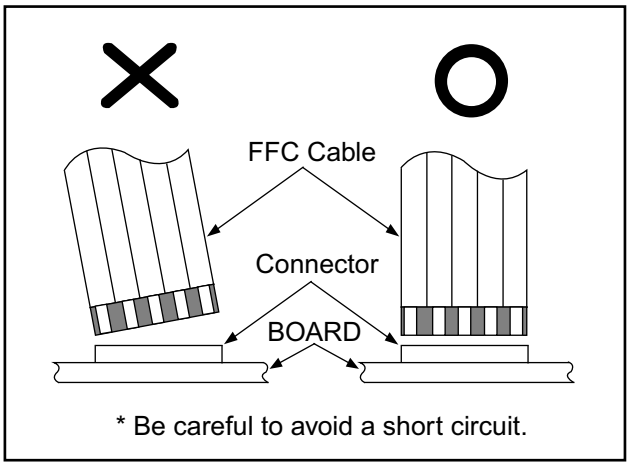



3. The 1st pin of every male connector is indicated as shown.




## Instructions for Connectors

1. When you connect or disconnect the FFC (Flexible Foil Connector) cable, be sure to first disconnect the AC cord.
2. FFC (Flexible Foil Connector) cable should be inserted parallel into the connector, not at an angle.




## Pb (Lead) Free Solder

**When soldering, be sure to use the Pb free solder.**

## How to Remove / Install Flat Pack-IC

### 1. Removal

**With Hot-Air Flat Pack-IC Desoldering Machine:**

1. Prepare the hot-air flat pack-IC desoldering machine, then apply hot air to the Flat Pack-IC (about 5 to 6 seconds). (Fig. S-1-1)

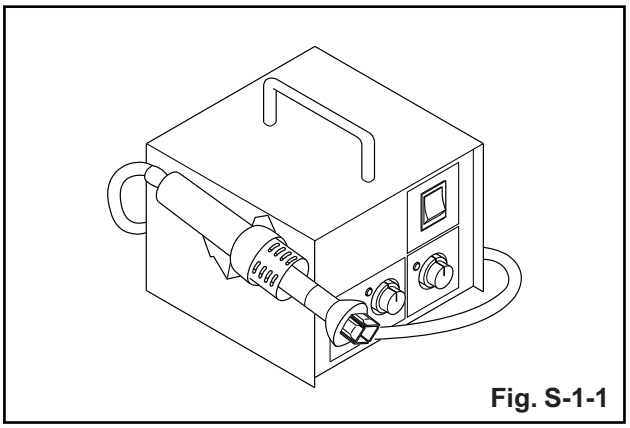


**Fig. S-1-1**

2. Remove the flat pack-IC with tweezers while applying the hot air.
3. Bottom of the flat pack-IC is fixed with glue to the BOARD; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the BOARD using tweezers. (Fig. S-1-6)

**CAUTION:**

1. The Flat Pack-IC shape may differ by models. Use an appropriate hot-air flat pack-IC desoldering machine, whose shape matches that of the Flat Pack-IC.
2. Do not supply hot air to the chip parts around the flat pack-IC for over 6 seconds because damage to the chip parts may occur. Put masking tape around the flat pack-IC to protect other parts from damage. (Fig. S-1-2)

3. The flat pack-IC on the BOARD is affixed with glue, so be careful not to break or damage the foil of each pin or the solder lands under the IC when removing it.

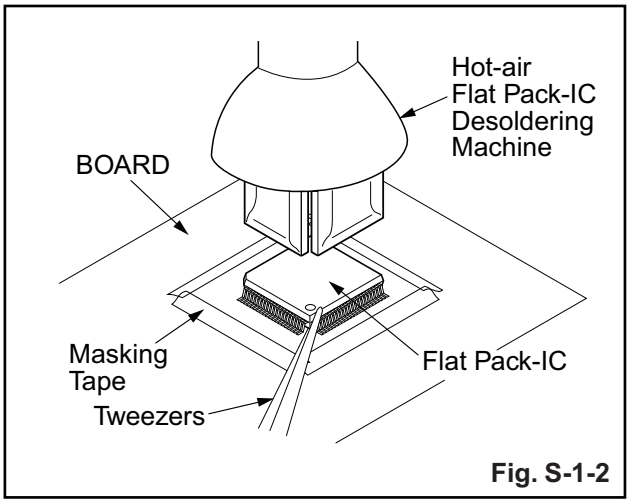



**Fig. S-1-2**

**With Soldering Iron:**

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)

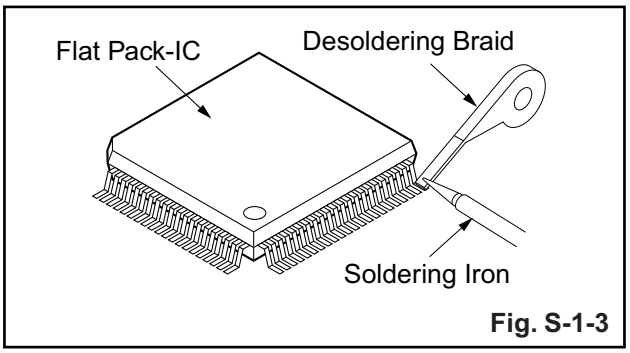



**Fig. S-1-3**

2. Lift each lead of the flat pack-IC upward one by one, using a sharp pin or wire to which solder will not adhere (iron wire). When heating the pins, use a fine tip soldering iron or a hot air desoldering machine. (Fig. S-1-4)

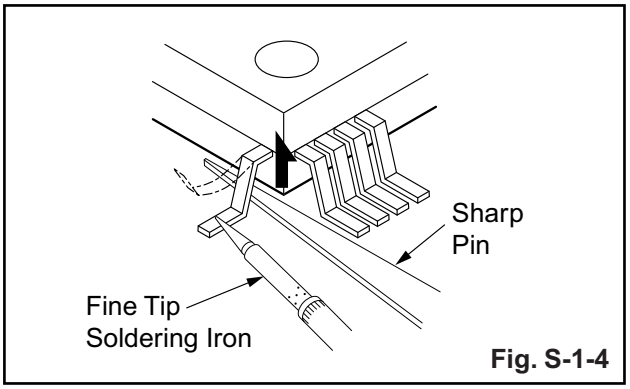



**Fig. S-1-4**

3. Bottom of the flat pack-IC is fixed with glue to the BOARD; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
4. Release the flat pack-IC from the BOARD using tweezers. (Fig. S-1-6)

**With Iron Wire:**

1. Using desoldering braid, remove the solder from all pins of the flat pack-IC. When you use solder flux which is applied to all pins of the flat pack-IC, you can remove it easily. (Fig. S-1-3)
2. Affix the wire to a workbench or solid mounting point, as shown in Fig. S-1-5.
3. While heating the pins using a fine tip soldering iron or hot air blower, pull up the wire as the solder melts so as to lift the IC leads from the BOARD contact pads as shown in Fig. S-1-5.
4. Bottom of the flat pack-IC is fixed with glue to the BOARD; when removing entire flat pack-IC, first apply soldering iron to center of the flat pack-IC and heat up. Then remove (glue will be melted). (Fig. S-1-6)
5. Release the flat pack-IC from the BOARD using tweezers. (Fig. S-1-6)

**Note:** When using a soldering iron, care must be taken to ensure that the flat pack-IC is not being held by glue. When the flat pack-IC is removed from the BOARD, handle it gently because it may be damaged if force is applied.

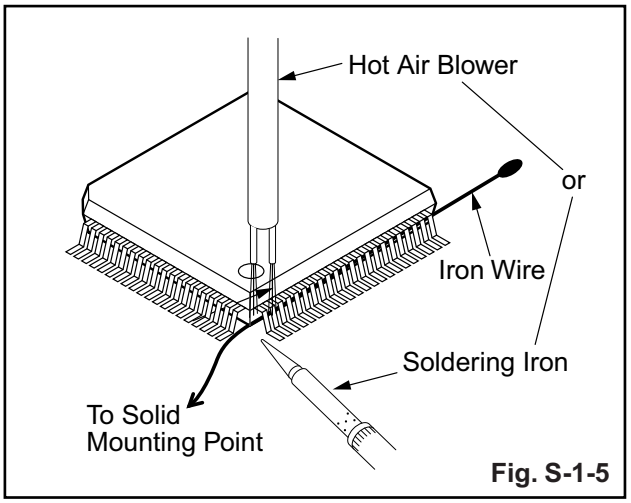



**Fig. S-1-5**

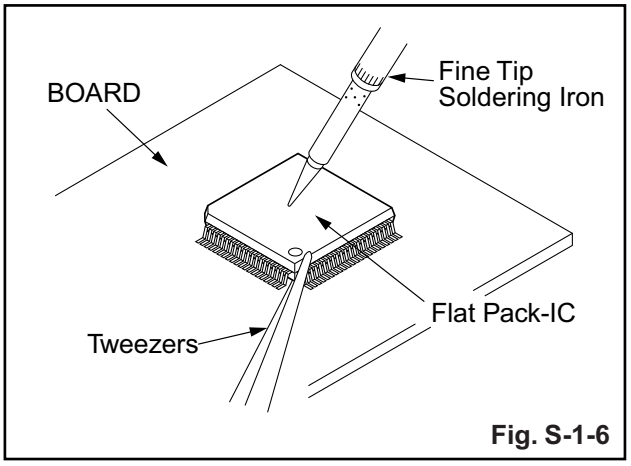



**Fig. S-1-6**

## 2. Installation

1. Using desoldering braid, remove the solder from the foil of each pin of the flat pack-IC on the BOARD so you can install a replacement flat pack-IC more easily.
2. The "●" mark on the flat pack-IC indicates pin 1. (See Fig. S-1-7.) Be sure this mark matches the 1 on the BOARD when positioning for installation. Then presolder the four corners of the flat pack-IC. (See Fig. S-1-8.)
3. Solder all pins of the flat pack-IC. Be sure that none of the pins have solder bridges.

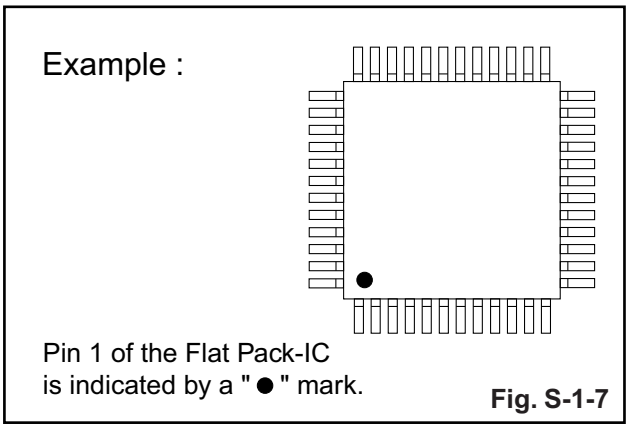



**Fig. S-1-7**

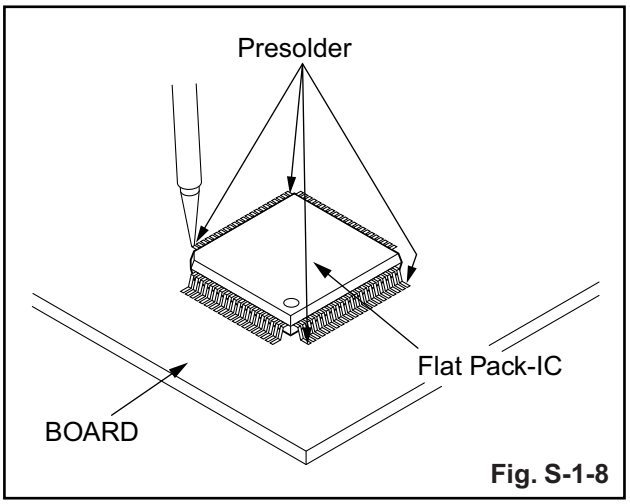



**Fig. S-1-8**

# Instructions for Handling Semi-conductors

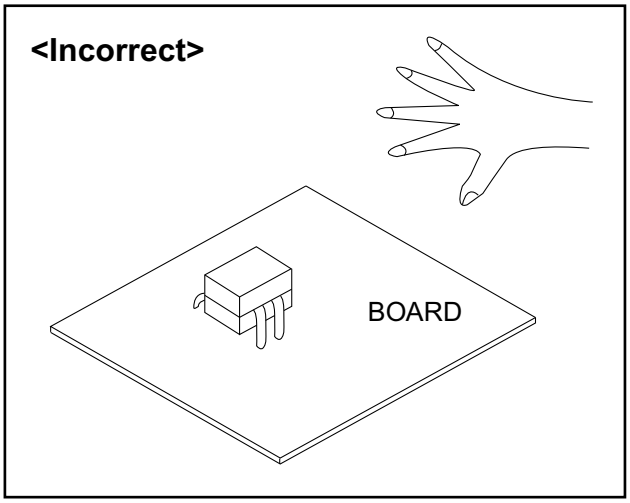
Electrostatic breakdown of the semi-conductors may occur due to a potential difference caused by electrostatic charge during unpacking or repair work.

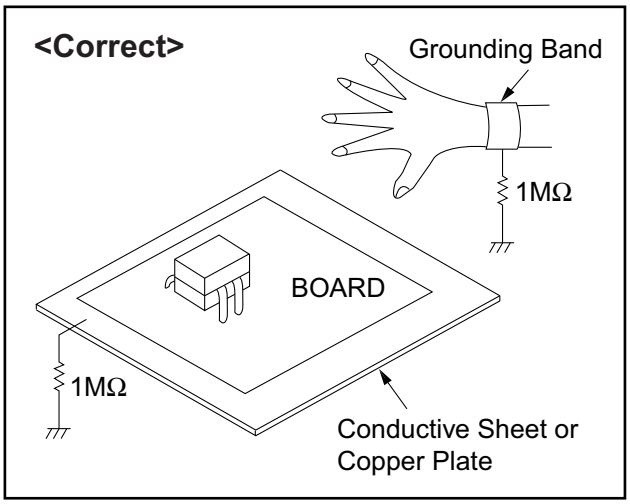
## 1. Ground for Human Body

Be sure to wear a grounding band (1 MΩ) that is properly grounded to remove any static electricity that may be charged on the body.

## 2. Ground for Workbench

Be sure to place a conductive sheet or copper plate with proper grounding (1 MΩ) on the workbench or other surface, where the semi-conductors are to be placed. Because the static electricity charge on clothing will not escape through the body grounding band, be careful to avoid contacting semi-conductors with your clothing.



# HANDLING PRECAUTIONS FOR HDD

## CAUTION:

### 1. SHOCK

a. Exposing HDD to shock may be the biggest damaging factor. Please note that HDD is easily damaged even if dropped from any height. Be sure to place HDD on a shock-absorbent mat. Also, be careful when transporting HDD.

b. Be careful not to subject HDD to any shock when tightening screws for HDD replacement. **(Tighten screws manually, not with an electric driver.)**

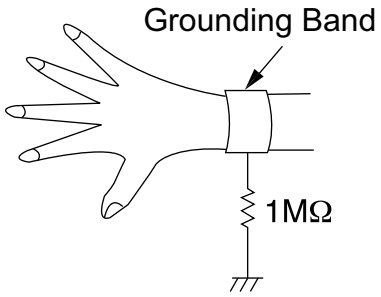
### 2. MOISTURE

a. Moisture may also be a damaging factor. HDD is semiclosed style. Sudden changes in ambient temperature may cause moisture to form. Monitor temperature and do not allow moisture to form on the media surface. Also, when opening HDD package, do so only after package is at ambient temperature.

b. After replacing HDD, leave it to reach room temperature (about 2 hours) for preventing dew internal condensation, and then work necessary task such as operation check.

### 3. STATIC ELECTRICITY

a. After removing HDD or taking replacement HDD out of the protective bag (the replacement HDD is packed in a protective bag), place HDD on a conductive surface. A grounding band should be worn when handling.




Both the conductive surface and grounding band should be grounded.

b. Make sure that HDD is placed on main unit completely and then let go of it, when assembling.

c. Do not put HDD on a packing bag. (for preventing electrostatic damage)

### 4. OTHERS

a. Be careful so as not to do the followings. Otherwise, HDD might be damaged.

- **DO NOT** disassemble HDD.
- When handling HDD, be sure to hold both sides securely.

b. HDD should be stored, packed in the protective bag, in suitable surroundings (i.e., no extreme changes in temperature to avoid condensation).

c. When transporting HDD, be sure to use the exclusive packing case (the replacement HDD carton).

d. Do not stack HDDs.

e. Do not place vertically because HDD is unstable and easy to fall.

# PREPARATION FOR SERVICING

## How to Enter the Service Mode

About Optical Sensors

**Caution:**

An optical sensor system is used for the Tape Start and End Sensors on this equipment. Carefully read and follow the instructions below. Otherwise the unit may operate erratically.

**What to do for preparation**

Insert a tape into the Deck Mechanism Assembly and press [ ▷ ] (VCR) button. The tape will be loaded into the Deck Mechanism Assembly. Make sure the power is on, connect TP501 (S-INH) to GND. This will stop the function of Tape Start Sensor, Tape End Sensor and Reel Sensors. (If these TPs are connected before plugging in the unit, the function of the sensors will stay valid.) See Fig. 1.

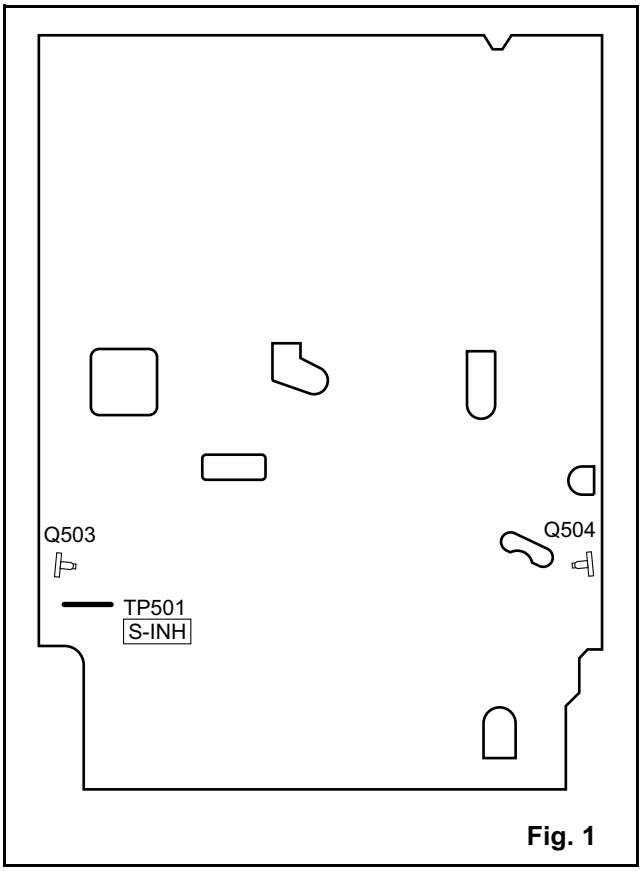



**Fig. 1**

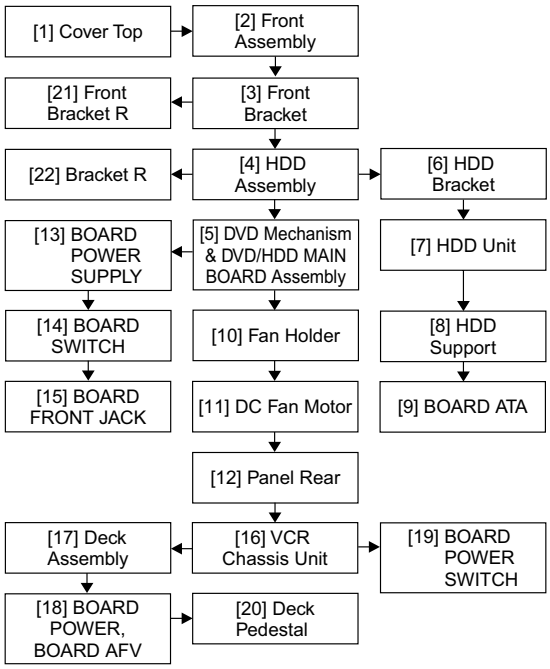
**Note:** Because the Tape End Sensors are inactive, do not run a tape all the way to the start or the end of the tape to avoid tape damage.

# CABINET DISASSEMBLY INSTRUCTIONS

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

## 1. Disassembly Flowchart

This flowchart indicates the disassembly steps to gain access to item(s) to be serviced. When reassembling, follow the steps in reverse order. Bend, route, and dress the cables as they were originally.




## 2. Disassembly Method

| ID/ LOC. No. | PART | REMOVAL | | |
|---|---|---|---|---|
| | | Fig. No. | REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER | Note |
| [1] | Cover Top | D1 | 7(S-1) | --- |
| [2] | Front Assembly | D2 | (S-2), *5(L-1), *3(L-2) | 1<br>1-1<br>1-2 |
| [3] | Front Bracket | D2 | 2(S-3), 3(S-3B), Front Support | --- |
| [4] | HDD Assembly | D3 | 3(S-4), *CN201, *CN1003 | --- |
| [5] | DVD Mechanism & DVD/ HDD MAIN BOARD Assembly | D3 | 2(S-5), 2(S-6), *CN1001, *CN1504, Wiresheet | 2 |
| [6] | HDD Bracket | D4 | 4(S-7) | --- |
| [7] | HDD Unit | D4 | 4(S-8), HDD Rubber | 3 |
| [8] | HDD Support | D4 | Insulation Sheet | --- |
| [9] | BOARD ATA | D4 | *CN3001, *CN3002 | --- |
| [10] | Fan Holder | D5 | 2(S-9) | --- |
| [11] | DC Fan Motor | D5 | *CN1002 | --- |
| [12] | Panel Rear | D5 | 2(S-10),2(S-10B), 2(S-11) | --- |
| [13] | BOARD POWER SUPPLY | D6 | *CL1001, 4(S-12) | --- |
| [14] | BOARD SWITCH | D6 | (S-13), Desolder | --- |
| [15] | BOARD FRONT JACK | D6 | *CN3001, 2(S-14) | --- |
| [16] | VCR Chassis Unit | D7 | 5(S-15), 4(S-16), (S-17) | --- |
| [17] | Deck Assembly | D8 | (S-18), (S-19) Desolder | 4<br>5 |
| [18] | BOARD POWER, BOARD AFV | D8 | ---------- | --- |
| [19] | BOARD POWER SWITCH | D8 | Desolder | --- |
| [20] | Deck Pedestal | D9 | 8(S-20) | --- |
| [21] | Front Bracket R | D9 | (S-21) | --- |
| [22] | Bracket R | D9 | 2(S-22) | --- |
| ↓ (1) | ↓ (2) | ↓ (3) | ↓ (4) | ↓ (5) |

**Note:**

(1): Identification (location) No. of parts in the figures

(2): Name of the part

(3): Figure Number for reference

(4): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, L=Locking Tab, S=Screw, CN=Connector
*=Unhook, Unlock, Release, Unplug, or Desolder
e.g. 6(S-1) = six Screws (S-1),
5(L-1) = five Locking Tabs (L-1)

(5): Refer to “Reference Notes.”

## Reference Notes

1. Locking Tabs (L-1) and (L-2) are fragile. Be careful not to break them.
   1-1. Remove Screw (S-2).
   1-2. Release five Locking Tabs (L-1).
   1-3. Release three Locking Tabs (L-2) and remove the Front Assembly.
2. Do not replace the DVD Mechanism or the DVD/HDD MAIN BOARD Assembly separately, when replacing the DVD Mechanism & DVD/HDD MAIN BOARD Assembly. Order the new DVD Mechanism & DVD/HDD MAIN BOARD Assembly.
   3-1. Whenever you have replaced the HDD unit, initialize the HDD unit. To initialize the HDD unit, perform the following.To put the HDD & DVD/VCR into the HDD mode, press the [HDD] button on the remote control unit.
   3-2. To put the HDD & DVD/VCR into the self-check mode, after pressing [VARIABLE SKIP] button, press the [3], [6], and [9] buttons on the remote control in that order within three seconds.
   3-3. Press [ENTER] button. The HDD & DVD/VCR is initialized and the power is turned off automatically after two seconds.
3. When reassembling, solder wire jumpers as shown in Fig. D8.
4. Before installing the Deck Assembly, be sure to place the pin of LD-SW on the BOARD POWER as shown in Fig. D8. Then, install the Deck Assembly while aligning the hole of Cam Gear with the pin of LD-SW, the shaft of Cam Gear with the hole of LD-SW as shown in Fig. D8.

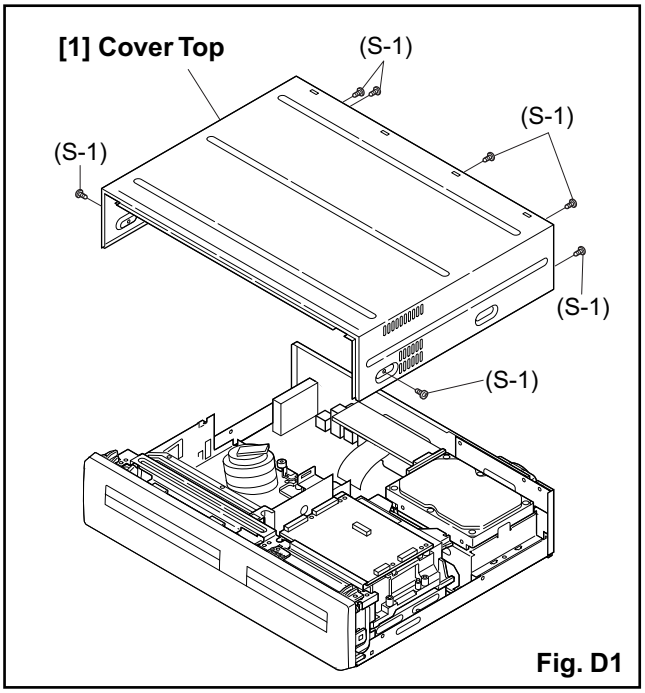


Fig. D1

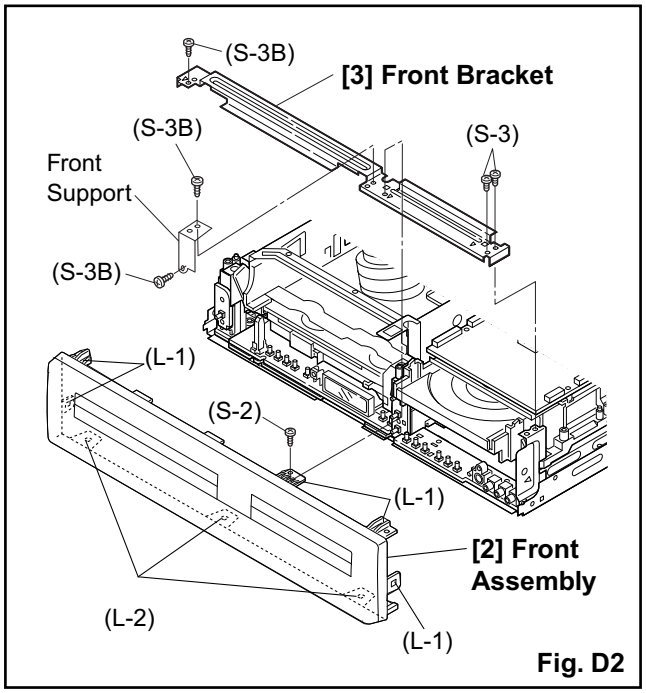


Fig. D2

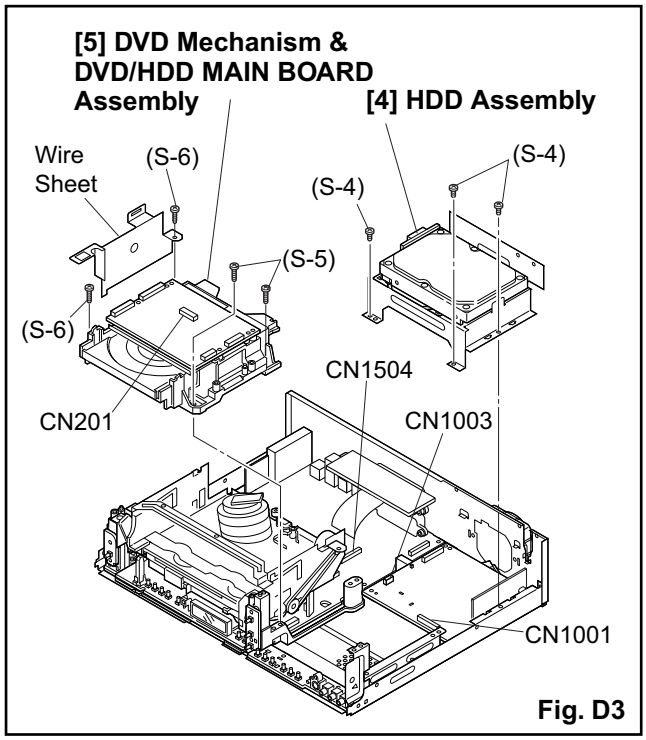


Fig. D3

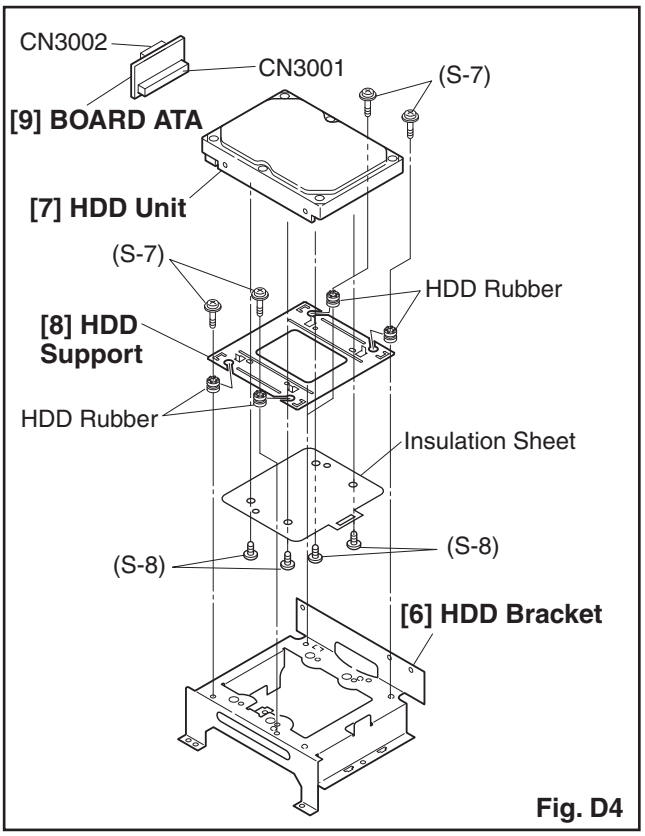



Fig. D4

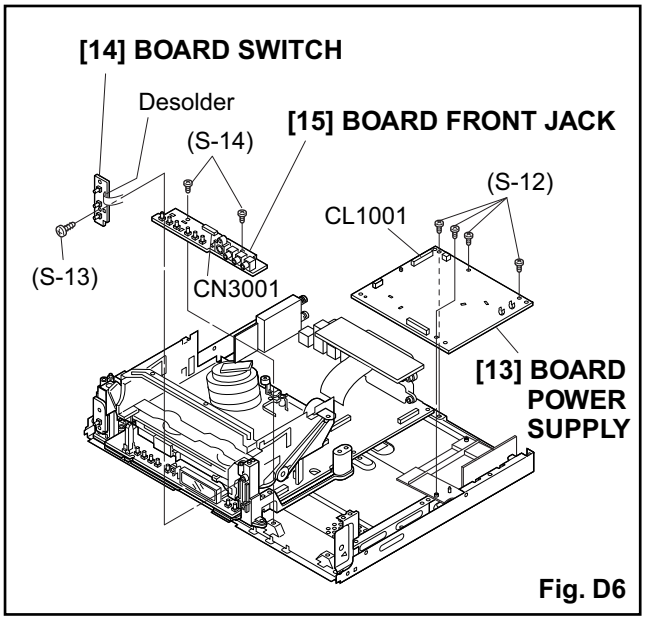



Fig. D6

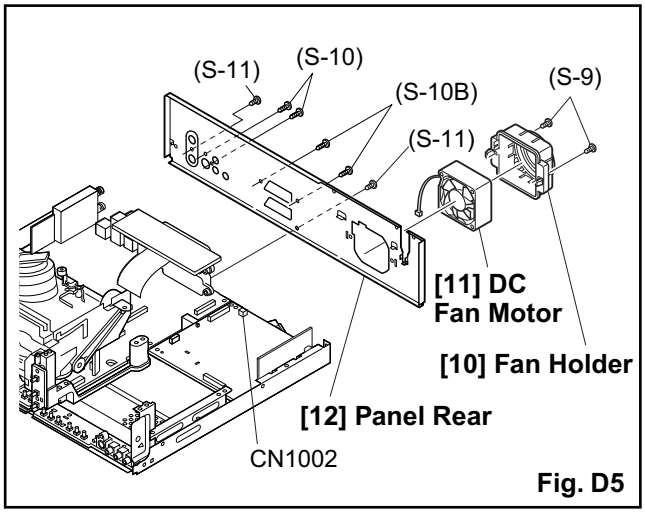



Fig. D5

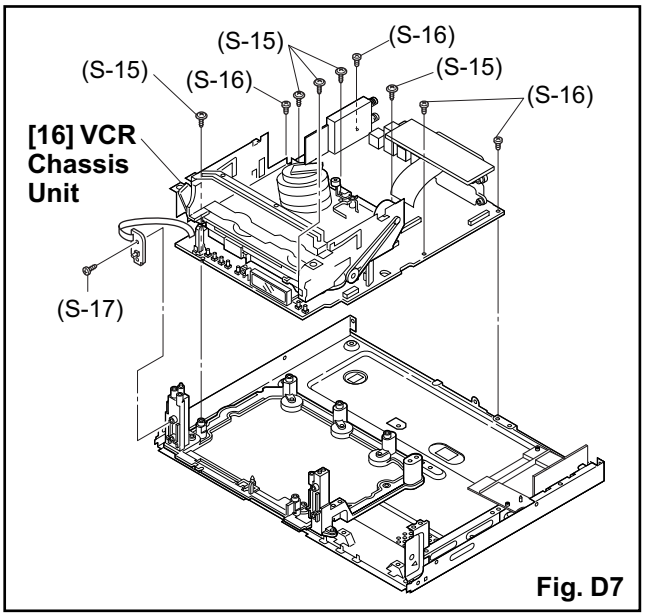
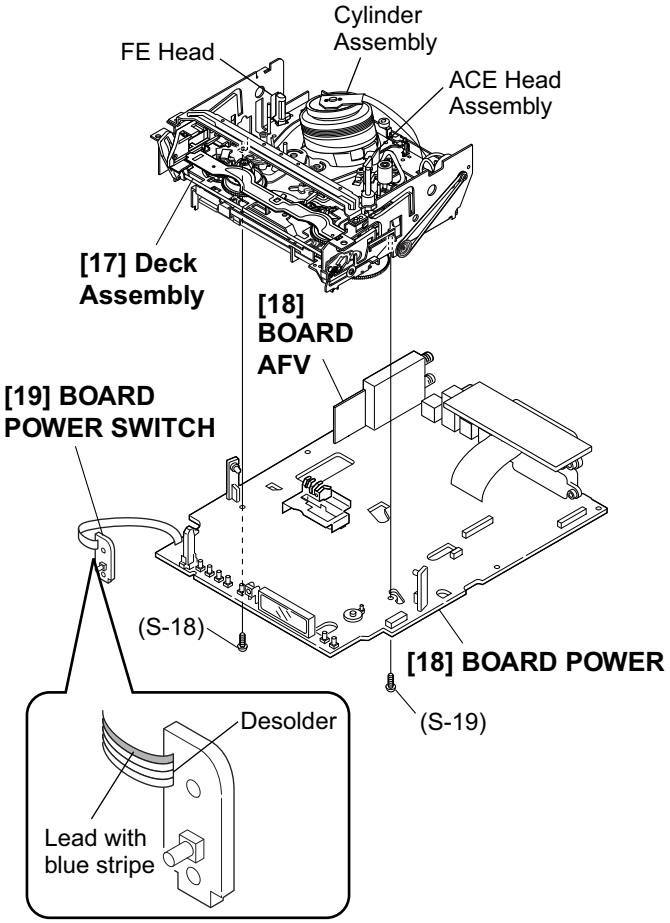
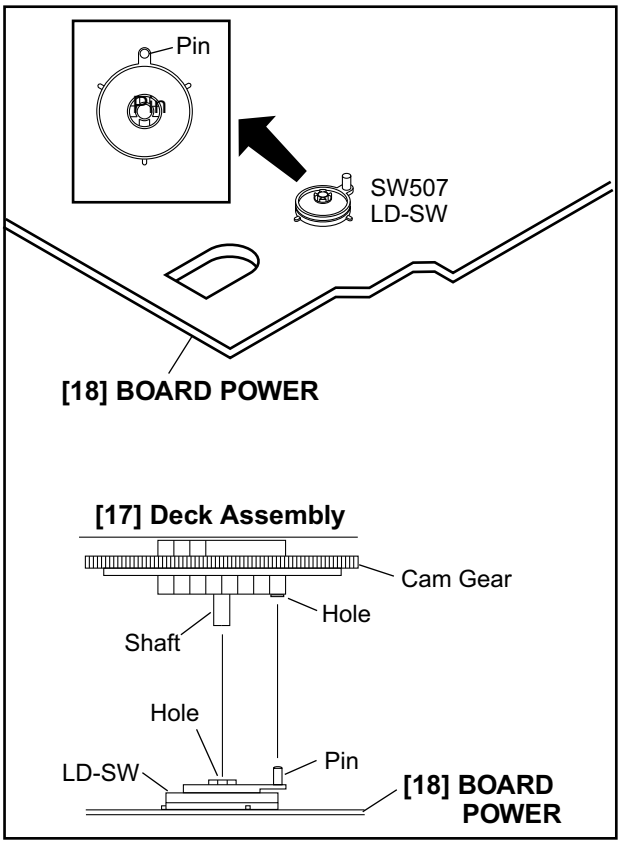
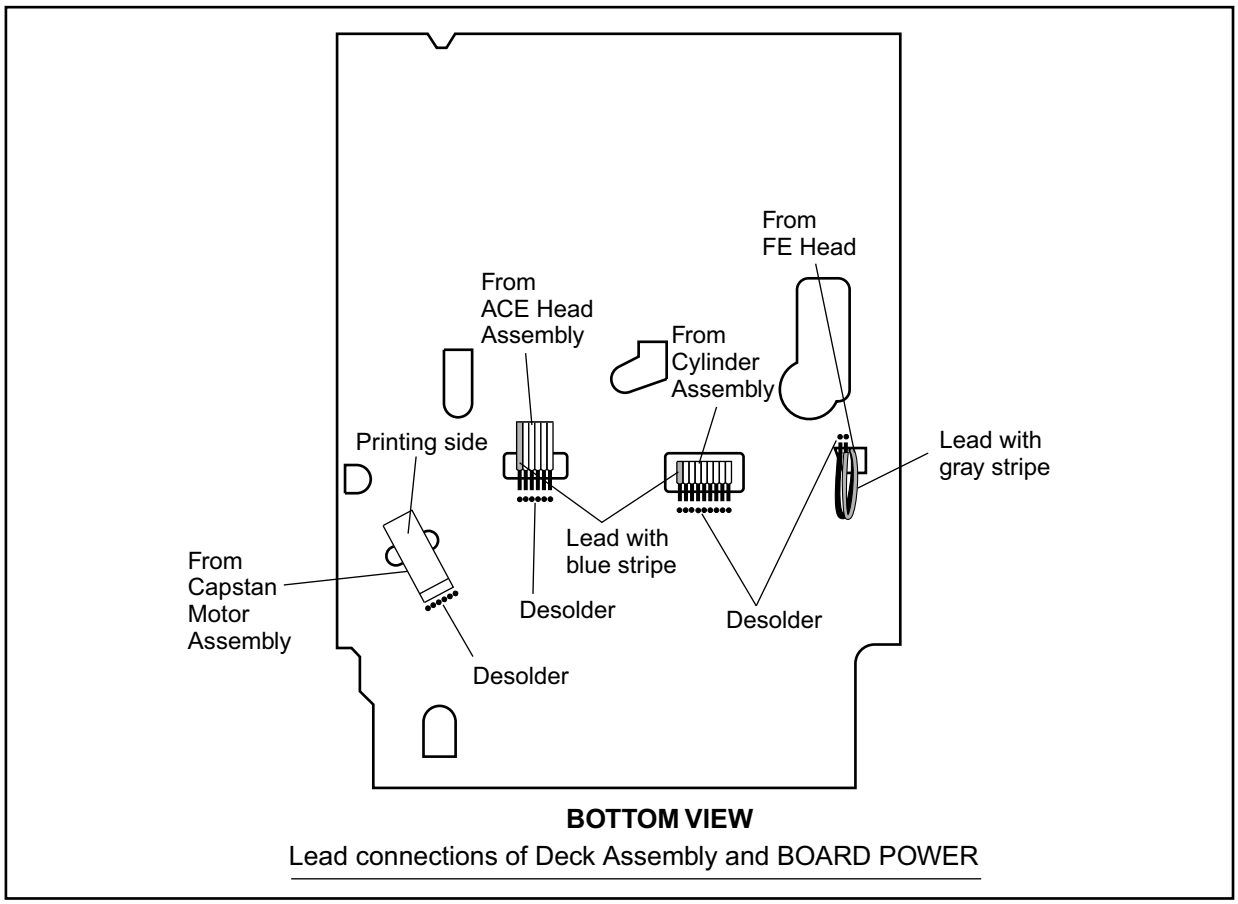



Fig. D7




**BOTTOM VIEW**

Lead connections of Deck Assembly and BOARD POWER

**Fig. D8**

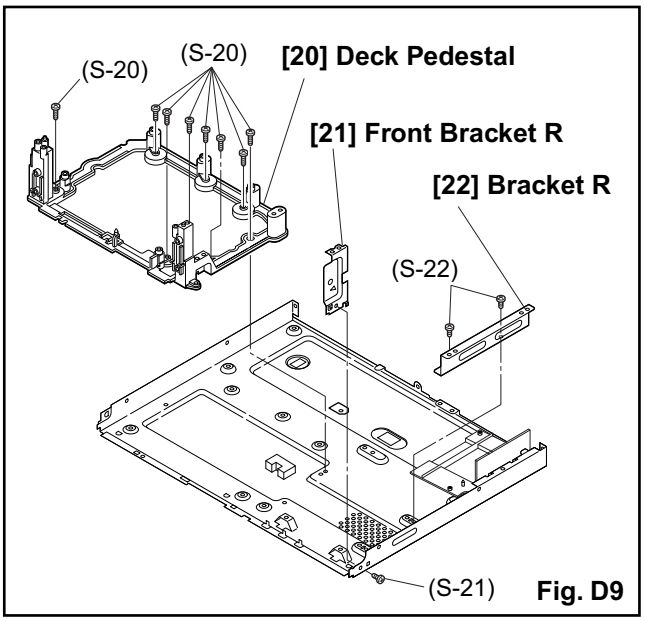
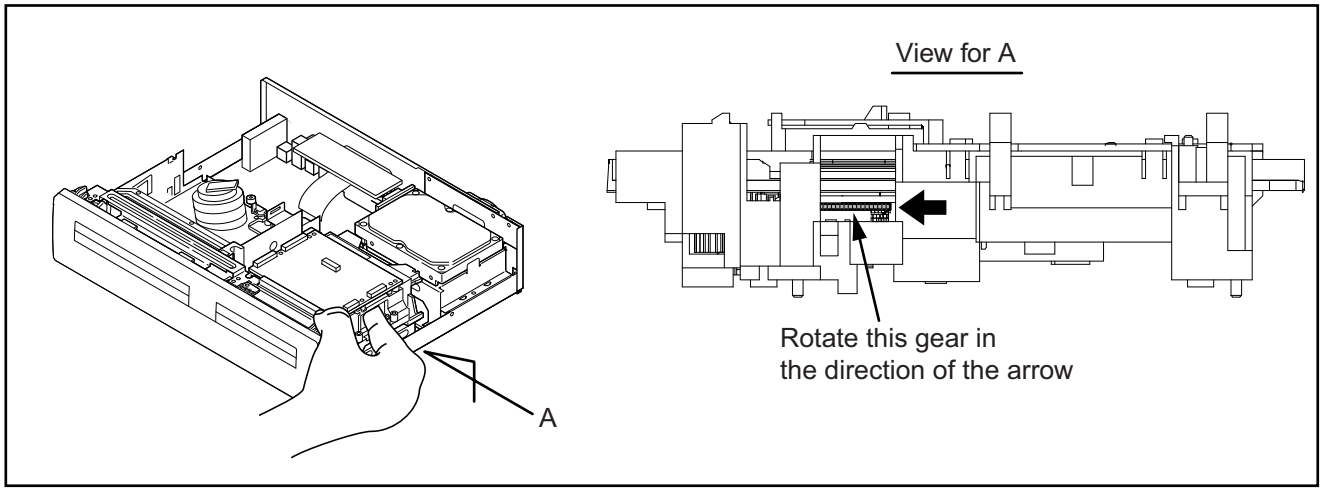


Fig. D9

## 3. How to Eject Manually

**Note:** When rotating the gear, be careful not to damage the gear.

1. Remove the Cover Top.
2. Rotate the gear in the direction of the arrow manually as shown below.



# ELECTRICAL ADJUSTMENT INSTRUCTIONS

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**NOTE:**

1. Electrical adjustments are required after replacing circuit components and certain mechanical parts. It is important to do these adjustments only after all repairs and replacements have been completed. Also, do not attempt these adjustments unless the proper equipment is available.
2. To perform these alignment / confirmation procedures, make sure that the tracking control is set in the center position: Press either [PROGRAM ∨] or [PROGRAM ∧] button on the front panel first, then the [ ▷ ] (VCR) button on the front panel.

## Test Equipment Required

1. Oscilloscope: Dual-trace with 10:1 probe,
   V-Range: 0.001~50V/Div.,
   F-Range: DC~AC-20MHz
2. Alignment Tape (FL6A)

## Head Switching Position Adjustment

**Purpose:**

To determine the Head Switching position during playback.

**Symptom of Misadjustment:**

May cause Head Switching noise or vertical jitter in the picture.

| Test point | Adj.Point | Mode | Input |
|---|---|---|---|
| J340(JK2-V-OUT)<br>TP504(RF-SW)<br>GND | VR501<br>(Switching Point)<br>(BOARD POWER) | PLAY<br>(SP) | ----- |
| **Tape** | **Measurement Equipment** | **Spec.** | |
| FL6A | Oscilloscope | 6.5H±1H<br>(416μs±64μs) | |

**Connections of Measurement Equipment**

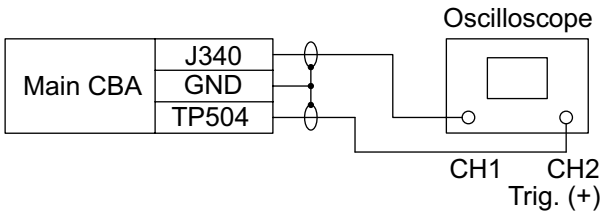
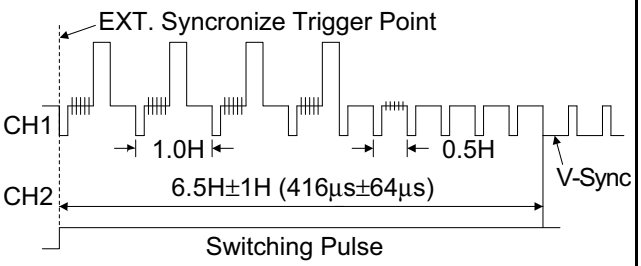



**Figure 1**




**Reference Notes:**

Playback the Alignment tape and adjust VR501 so that the V-sync front edge of the CH1 video output waveform is at the 6.5H±1H (416μs±64μs) delayed position from the rising edge of the CH2 head switching pulse waveform.

# HOW TO SELF-CHECK AND INITIALIZE THE HDD & DVD/VCR

1. Turn on the HDD & DVD/VCR.
2. To put the HDD & DVD/VCR into the HDD mode, press [HDD] on the remote control unit.
3. To put the HDD & DVD/VCR into the self-check mode, after pressing [VARIABLE SKIP] button, press the [3], [6], and [9] buttons on the remote control in that order within three seconds.
   Fig. a appears on the screen and all LEDs light.

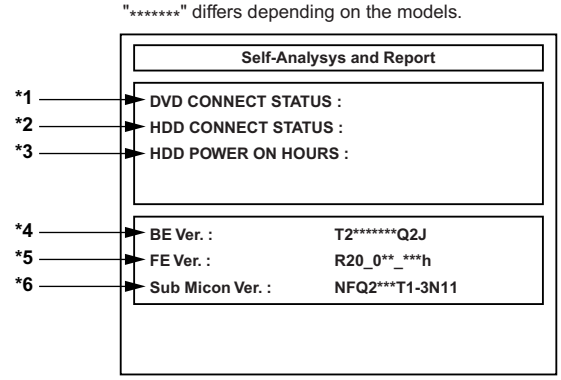



Fig. a: Self-Check Mode Screen

Table 1: Description of Fig. a

| INDICATION | DESCRIPTION |
|---|---|
| DVD CONNECT STATUS (*1) | Connecting Condition of DVD(F/E) |
| HDD CONNECT STATUS (*2) | Connecting Condition of HDD |
| HDD POWER ON HOURS (*3) | Value of HDD power on hours obtained from S.M.A.R.T. command. (If not obtainable, value of HDD power on hours is “0”.)<br>Value in parentheses is the factory setting value. (If no setting, the value is “0”.) |
| BE Ver. (*4) | B/E version |
| FE Ver. (*5) | F/E version |
| Sub Micon Ver. (*6) | Sub micro controller version |

4. Upon the self-check completion, Fig. b appears on the screen.

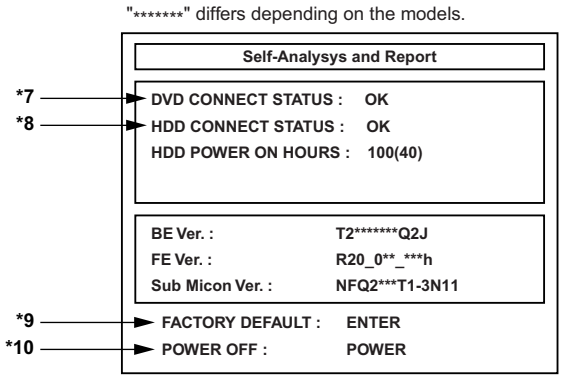



Fig. b: Screen of Finishing Self-Check Mode

Table 2: Indication of DVD self-check (*7)

| INDICATION | DESCRIPTION |
|---|---|
| OK | Connection of DVD is normal. |
| NOT FOUND | DVD drive cannot be found. |
| CABLE ERROR | FFC cable (connecting to CN401) between the DVD drive and the DVD/HDD MAIN BOARD is not connected correctly. |

Table 3: Indication of HDD self-check (*8)

| INDICATION | DESCRIPTION |
|---|---|
| OK | Connection of HDD is normal. |
| NOT FOUND | HDD drive cannot be found. |
| CABLE ERROR | FFC cable between the BOARD ATA and the HDD drive is not connected correctly. |

Table 4: Available button in self-check mode

| BUTTON | DESCRIPTION |
|---|---|
| ENTER (*9) | Initialize (only when the self-check mode is complete) |
| ON / STANDBY (*10) | Turn the power off (when the self-check mode is complete) |
| OTHER | Not available |

5. When the self-check mode is complete, press [I/⏻] button to turn the power off.
   When initializing the HDD & DVD/VCR, press [ENTER] button. Fig. c appears on the screen. After two seconds, the power is turned off automatically.

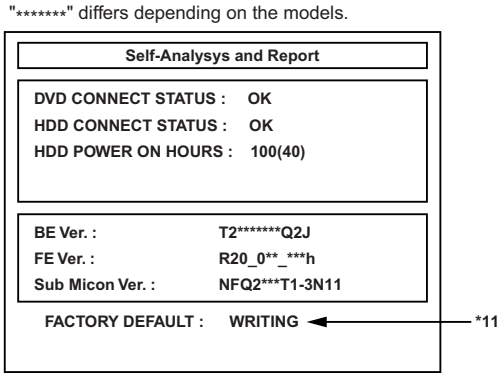

"*******" differs depending on the models.
Self-Analysys and Report
DVD CONNECT STATUS : OK
HDD CONNECT STATUS : OK
HDD POWER ON HOURS : 100(40)
BE Ver. : T2*******Q2J
FE Ver. : R20_0**_***h
Sub Micon Ver. : NFQ2***T1-3N11
FACTORY DEFAULT : WRITING
*11

Fig. c: Initialize Mode Screen

Table 5: Description of *11 in Fig. c

| INDICATION | DESCRIPTION |
|---|---|
| ENTER | Initialization preparation is complete. |
| WRITING | Initializing |
| OK | Initializing is finished normally. |
| NG | Initializing is not finished normally. |

**NOTE:** When initializing, “Current Clock”, “Setup Changing Item”, “Channel Setup”, “Area Setup”, “Program” and “HDD Contents” are initialized.

# FIRMWARE RENEWAL MODE

## 1. Update Contents

| | Item | Status |
|---|---|---|
| 1 | B/E | Update B/E FIRMWARE |
| 2 | F/E | Update F/E FIRMWARE |

## 2. Update

1. Turn the power on and remove the disc in the tray.
2. To switch the HDD & DVD/VCR into the HDD mode, press [HDD] on the remote control unit.
3. To put the HDD & DVD/VCR into version up mode, press [VARIABLE SKIP] and [6], [5], [4] buttons on the remote control unit in that order within 3 seconds. The tray will open automatically.
   Fig. a appears on the TV screen and Fig. b appears on the VFD.

*FIRMWARE version will differ depending on the model. Fig. a is an example.

Fig. a: Update Mode TV Screen

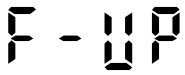



Fig. b: VFD Display in Update Mode

4. Load the update disc.
   The TV screen will display Fig. c.
   - If the update disc contains only a single file, the update will initiate automatically when the disc is inserted.

*FIRMWARE version will differ depending on the model. Fig. c is an example.

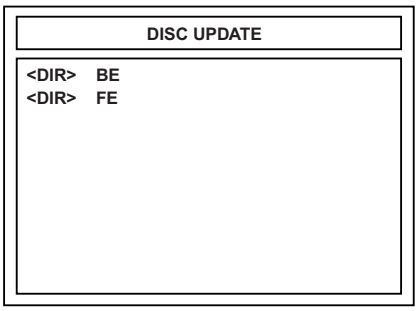



Fig. c: Update Disc TV Screen

Effective FIRMWARE update files will have the file extensions shown below.

| File extension | Status |
|---|---|
| BIN | B/E FIRMWARE file |
| MOT | F/E FIRMWARE file |

5. Select the desired FIRMWARE to be updated with the arrow button and press the [ENTER] button. FIRMWARE will automatically select the appropriate F/E or B/E version.
   Fig. d appears on the TV screen and Fig. e appears on the VFD, and the update will start.

*FIRMWARE version will differ depending on the model. Fig. d is an example.

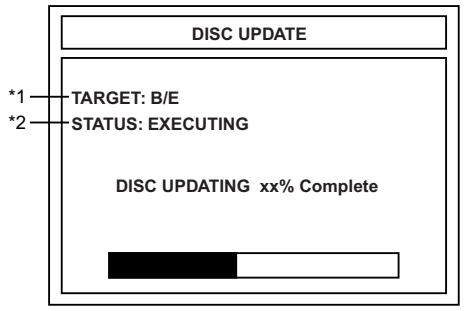



Fig. d: TV Display during update

The status displayed in *1 is as shown below.

| Display | Status |
|---|---|
| B/E | FIRMWARE B/E |
| F/E | FIRMWARE F/E |
| UNKNOWN | Not FIRMWARE B/E or F/E |

The status displayed in *2 is as shown below.

| Display | Status |
|---|---|
| EXECUTING | Loading F/W from Update Disc or writing to Flash memory |
| OK | Update successful |
| ERROR | Error during Flash memory writing |
| FILE ERROR | Check SAM error in F/W file |
| READ ERROR | Error during F/W file reading |

Fig. e: VFD Display during update

Re: the VFD display shown in Fig. e.

When the TV screen displays "Firmware Updating... XX% Complete," the VFD will indicate "XX"%.

6. When completing update, the tray will open automatically.
   The TV screen will display Fig. f.

*FIRMWARE version will differ depending on the model. Fig. f is an example.

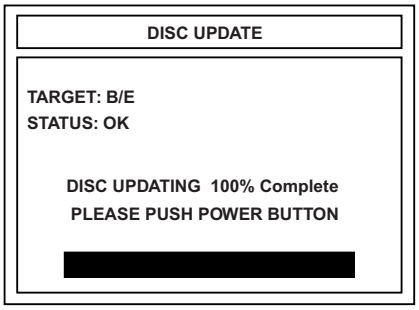



Fig. f: TV Display when completing update

If the update is completed correctly, the VFD will indicate Fig. g.

Fig. g: VFD Display when completing update

Fig. h: VFD Display when completing update with error

In this case, all button operations will be invalid except [I/⏻] button.

7. Press [I/⏻] button to turn the power off and press [I/⏻] button again to turn the power on and finish updating.

## 3. How to Verify the Firmware Version

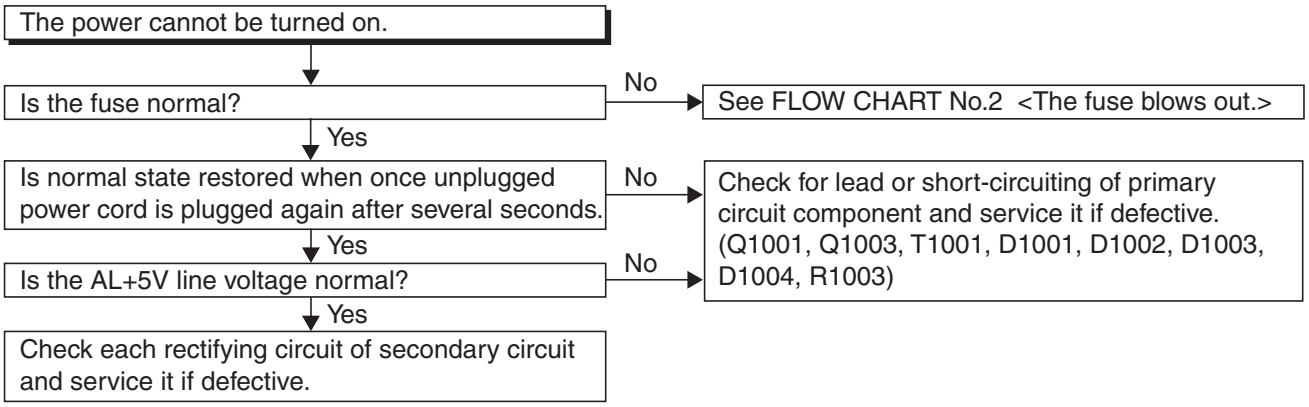
1. Turn the power on and remove the disc in the tray.
2. To switch the HDD & DVD/VCR into the HDD mode, press [HDD] on the remote control unit.
3. Press [VARIABLE SKIP] and [1], [2], [3] buttons on the remote control unit in that order within 3 seconds. The Firmware version appears on the TV screen.
4. Press [I/⏻] button to reset the unit.

# TROUBLESHOOTING

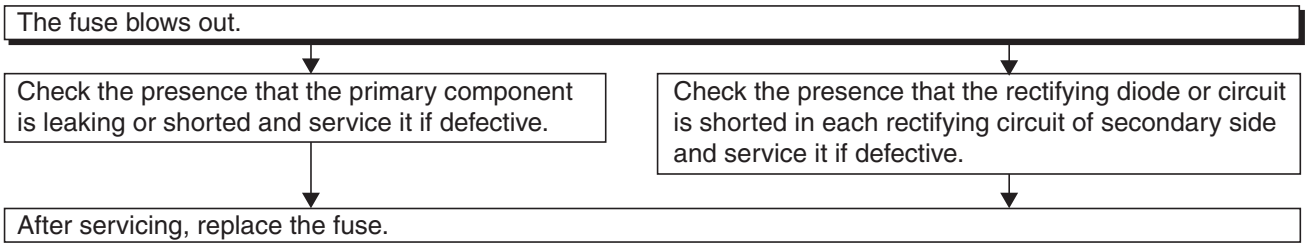
**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

## 1 Power Supply Section

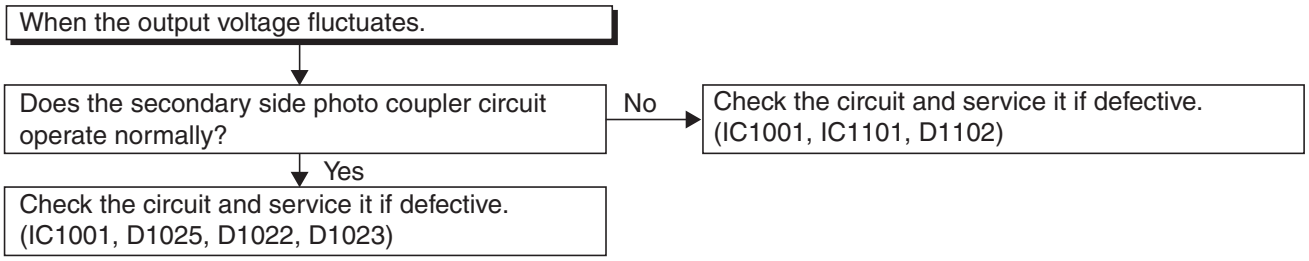
**FLOW CHART NO.1**


The power cannot be turned on.
Is the fuse normal?
No
See FLOW CHART No.2 <The fuse blows out.>
Yes
Is normal state restored when once unplugged power cord is plugged again after several seconds.
No
Check for lead or short-circuiting of primary circuit component and service it if defective. (Q1001, Q1003, T1001, D1001, D1002, D1003, D1004, R1003)
Yes
Is the AL+5V line voltage normal?
No
Yes
Check each rectifying circuit of secondary circuit and service it if defective.

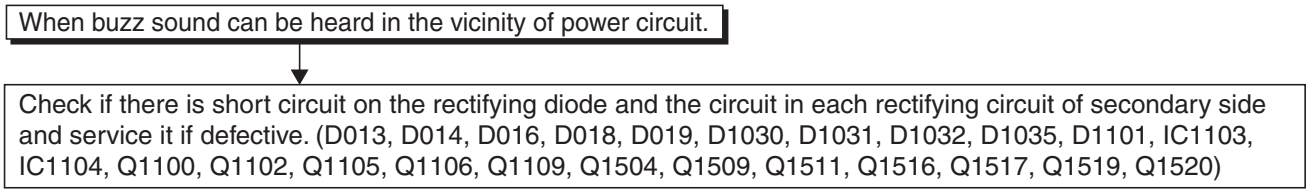
**FLOW CHART NO.2**


The fuse blows out.
Check the presence that the primary component is leaking or shorted and service it if defective.
Check the presence that the rectifying diode or circuit is shorted in each rectifying circuit of secondary side and service it if defective.
After servicing, replace the fuse.

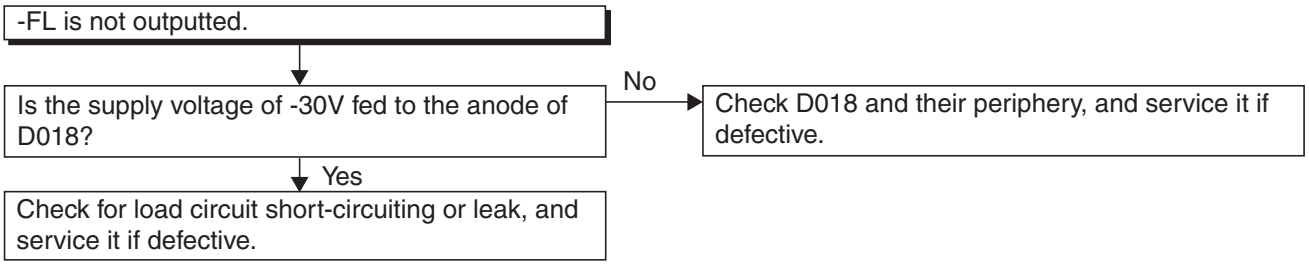
**FLOW CHART NO.3**


When the output voltage fluctuates.
Does the secondary side photo coupler circuit operate normally?
No
Check the circuit and service it if defective. (IC1001, IC1101, D1102)
Yes
Check the circuit and service it if defective. (IC1001, D1025, D1022, D1023)

**FLOW CHART NO.4**


When buzz sound can be heard in the vicinity of power circuit.
Check if there is short circuit on the rectifying diode and the circuit in each rectifying circuit of secondary side and service it if defective. (D013, D014, D016, D018, D019, D1030, D1031, D1032, D1035, D1101, IC1103, IC1104, Q1100, Q1102, Q1105, Q1106, Q1109, Q1504, Q1509, Q1511, Q1516, Q1517, Q1519, Q1520)

**FLOW CHART NO.5**


-FL is not outputted.
Is the supply voltage of -30V fed to the anode of D018?
No
Check D018 and their periphery, and service it if defective.
Yes
Check for load circuit short-circuiting or leak, and service it if defective.

**FLOW CHART NO.6**

EV+44V is not outputted.

Is 44V voltage supplied to the emitter of Q1509?
- No → Check D013, C013, and their periphery, and service it if defective.
- Yes ↓

Is the "L" pulse (approximately 0V) inputted to the base of Q1509?
- No → Is the "H" pulse (approximately 5V) inputted to the base of Q1510?
  - Yes → Replace Q1510.
  - No → Is 5V voltage supplied to the Pin(37,99) of IC501.
    - Yes → Replace IC501.
    - No → Check AL+5V line, and service it if defective.
- Yes ↓

Replace Q1509.

**FLOW CHART NO.7**

HDD+12V is not outputted.

Is 44V voltage supplied to the collector of Q1100?
- No → Check D017, D1031, D1035, C1037 and their periphery, and service it if defective.
- Yes ↓

Is the "H" pulse inputted to the base of Q1100?
- No → Is the "H" pulse inputted to the base of Q1104?
  - Yes → Is the "L" pulse outputted to the collector of Q1104?
    - No → Replace Q1104.
    - Yes ↓

    Is 37V voltage outputted to the collector of Q1101?
    - No → Replace Q1101.
    - Yes ↓

    Check IC1102 and their periphery, and service it if defective.
  - No → Is 3.3V voltage supplied to Pin(6, 7) of IC1504?
    - Yes → Replace IC501.
    - No → Check EV+3.3V, TIMER+5V line, Q1527, Q1528, D1525, and service it if defective.
- Yes ↓

Replace Q1100.

**FLOW CHART NO.8**

P-ON+9V is not outputted. (HDD+12V is outputted normally)

Is the "H" pulse (approximately 10V) inputted to the base of Q1105?
- No → Check D1120, R1138, R1159, and their periphery, and service it if defective.
- Yes ↓

Replace Q1105.

**FLOW CHART NO.9**

P-ON+5V is not outputted. (P-ON+9V is outputted normally)

Is 5V voltage supplied to the collector of Q1106?
- No → Check D016, D1032, D1102, C1104, C1105, and their periphery, and service it if defective.
- Yes ↓

Is the "H" pulse inputted to the base of Q1106?
- No → Check R1140 and their periphery, and service it if defective.
- Yes ↓

Replace Q1106.

**FLOW CHART NO.10**

HDD+5V is not outputted.

↓

Is 5V voltage supplied to the emitter of Q1102?

No → Check D016, D1032, D1102, C1104, C1105 and their periphery, and service it if defective.

↓ Yes

Is the "L" pulse outputted to the collector of Q1104?

No → Check Q1104, D1117 and their periphery, and service it if defective.

↓ Yes

Replace Q1102.

**FLOW CHART NO.11**

P-ON+2.5V is not outputted.

↓

Is 4V voltage supplied to Pin(1) of IC1103?

No → Check D1101, C1107, and their periphery, and service it if defective.

↓ Yes

Replace IC1103.

**FLOW CHART NO.12**

P-ON+3.3V is not outputted.

↓

Is 5V voltage supplied to Pin(1) of IC1104?

No → Check D1101, C1107, and their periphery, and service it if defective.

↓ Yes

Replace IC1104.

**FLOW CHART NO.13**

The fluorescent display tube does not light up.

↓

Is 3.3V voltage supplied to Pin(6, 24) of IC612?

No → Check the EV+3.3V line and service it if defective.

↓ Yes

Is approximately -24V to -28V voltage supplied to Pin(15) of IC612?

No → Check the -FL line and service it if defective.

↓ Yes

Is there approximately 500kHz oscillation to Pin(26) of IC612?

No → Check R621, IC612 and their periphery, and service it if defective.

↓ Yes

Are the filament voltage applied between Pin(1) and Pin(24) of the fluorescent display tube?
Also negative voltage applied between these pins and GND?

No → Check the power circuit, D1103, D1108, R1106, C1110 and their periphery, and service it if defective.

↓ Yes

Replace the fluorescent display tube (FL601).

## 2 HDD/DVD Section

**FLOW CHART NO.1**

The key operation is not functioning.

↓

Are the contact point and the installation state of the key switches normal? — No → Re-install the key switches correctly or replace the poor switch.

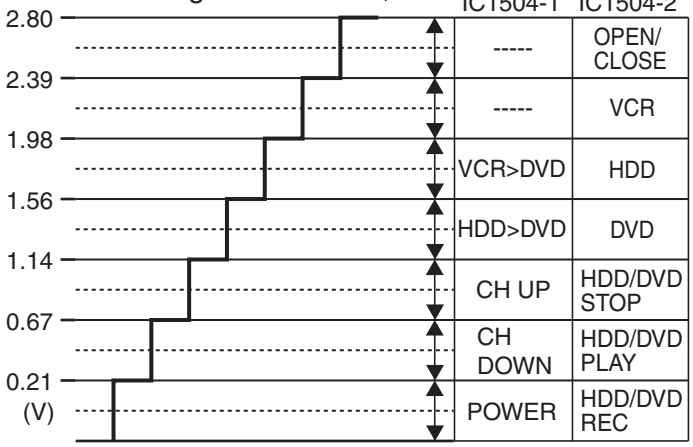
↓ Yes

Is the control voltage normally inputted into Pin(1,2) of IC1504? — No → Check the key switches and their periphery, and service it if defective.

↓ Yes

Replace IC1504 or DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.

Terminal voltage of IC1504-1,2




| KEY-1 IC1504-1 | KEY-2 IC1504-2 |
|---|---|
| ----- | OPEN/ CLOSE |
| ----- | VCR |
| VCR>DVD | HDD |
| HDD>DVD | DVD |
| CH UP | HDD/DVD STOP |
| CH DOWN | HDD/DVD PLAY |
| POWER | HDD/DVD REC |

**FLOW CHART NO.2**

No HDD/DVD operation is possible from the remote control unit. (Operation is possible from the unit.)

↓

Is 5V voltage supplied to Pin(3) terminal of the RM1501 (remote control receiver)? — No → Check AL+5V line, and service it if defective.

↓ Yes

Is the "L" pulse sent out from Pin(1) terminal of the RM1501 (remote control receiver) when the remote control unit is activated? — No → Replace the RM1501 (remote control receiver). Replace remote control unit if needed.

↓ Yes

Is the "L" pulse signal supplied to Pin(27) of IC1504? — No → Check the line between the RM1501 (remote control receiver) and Pin(27) of IC1504, and service it if defective.

↓ Yes

Replace IC1504 or DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.

**FLOW CHART NO.3**

The [No Disc] indication.

Both picture and sound do not operate normally.

↓

Replace the DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.

**FLOW CHART NO.4**

VIDEO E-E does not appear normally.

Are the video signals inputted to each pin of IC1506?

| | | |
|---|---|---|
| IC1506 | 16PIN | VIDEO-IN 1 (AV1) |
| IC1506 | 14PIN | VIDEO-IN (FRONT) |
| IC1506 | 7PIN | Y-IN 1 (FRONT) |
| IC1506 | 9PIN | C-IN 1 (FRONT) |
| IC1506 | 12PIN | VIDEO-IN 2 (AV2) |
| IC1506 | 20PIN | TUNER-VIDEO |

No → Check the line between video input terminal and each pin of IC1506.

| | | |
|---|---|---|
| IC1506 | 16PIN → JK1504 | VIDEO-IN 1 (AV1) |
| IC1506 | 14PIN → JK3001 | VIDEO-IN (FRONT) |
| IC1506 | 7PIN → IC3001 | Y-IN 1 (FRONT) |
| IC1506 | 9PIN → IC3001 | C-IN 1 (FRONT) |
| IC1506 | 12PIN → JK2001 | VIDEO-IN 2 (AV2) |
| IC1506 | 20PIN → TU1501 17PIN | TUNER-VIDEO |

Yes

Are the video signals outputted to each pin of IC1506?

| | | |
|---|---|---|
| IC1506 | 61PIN | VIDEO-Y/CVBS-IN |
| IC1506 | 59PIN | VIDEO-C-IN |

No → Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?

Yes → Replace IC1506.

No → Check the AL+5V(2) , AL+9V line and service it if defective.

Yes

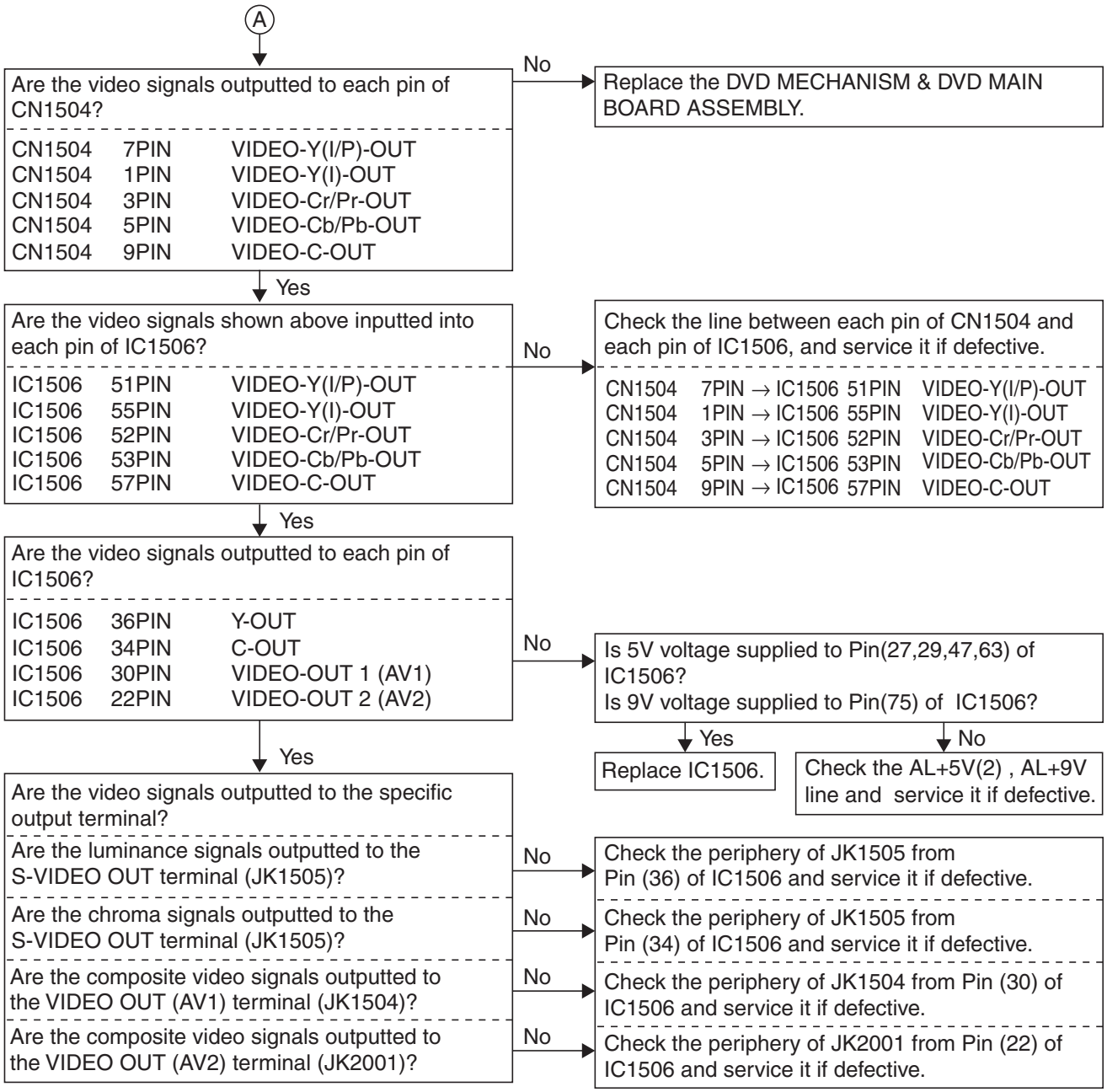
Are the video signals outputted to each pin of CN1504?

| | | |
|---|---|---|
| CN1504 | 21PIN | VIDEO-Y/CVBS-IN |
| CN1504 | 23PIN | VIDEO-C-IN |

No → Check the line between each pin of IC1506 and each pin of CN1504 and service it if defective.

| | | |
|---|---|---|
| IC1506 61PIN → CN1504 21PIN | | VIDEO-Y/CVBS-IN |
| IC1506 59PIN → CN1504 23PIN | | VIDEO-C-IN |

Continued to (A) on the next page.


A
Are the video signals outputted to each pin of CN1504?
CN1504 7PIN VIDEO-Y(I/P)-OUT
CN1504 1PIN VIDEO-Y(I)-OUT
CN1504 3PIN VIDEO-Cr/Pr-OUT
CN1504 5PIN VIDEO-Cb/Pb-OUT
CN1504 9PIN VIDEO-C-OUT
No
Replace the DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.
Yes
Are the video signals shown above inputted into each pin of IC1506?
IC1506 51PIN VIDEO-Y(I/P)-OUT
IC1506 55PIN VIDEO-Y(I)-OUT
IC1506 52PIN VIDEO-Cr/Pr-OUT
IC1506 53PIN VIDEO-Cb/Pb-OUT
IC1506 57PIN VIDEO-C-OUT
No
Check the line between each pin of CN1504 and each pin of IC1506, and service it if defective.
CN1504 7PIN → IC1506 51PIN VIDEO-Y(I/P)-OUT
CN1504 1PIN → IC1506 55PIN VIDEO-Y(I)-OUT
CN1504 3PIN → IC1506 52PIN VIDEO-Cr/Pr-OUT
CN1504 5PIN → IC1506 53PIN VIDEO-Cb/Pb-OUT
CN1504 9PIN → IC1506 57PIN VIDEO-C-OUT
Yes
Are the video signals outputted to each pin of IC1506?
IC1506 36PIN Y-OUT
IC1506 34PIN C-OUT
IC1506 30PIN VIDEO-OUT 1 (AV1)
IC1506 22PIN VIDEO-OUT 2 (AV2)
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
Replace IC1506.
No
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Are the video signals outputted to the specific output terminal?
Are the luminance signals outputted to the S-VIDEO OUT terminal (JK1505)?
No
Check the periphery of JK1505 from Pin (36) of IC1506 and service it if defective.
Are the chroma signals outputted to the S-VIDEO OUT terminal (JK1505)?
No
Check the periphery of JK1505 from Pin (34) of IC1506 and service it if defective.
Are the composite video signals outputted to the VIDEO OUT (AV1) terminal (JK1504)?
No
Check the periphery of JK1504 from Pin (30) of IC1506 and service it if defective.
Are the composite video signals outputted to the VIDEO OUT (AV2) terminal (JK2001)?
No
Check the periphery of JK2001 from Pin (22) of IC1506 and service it if defective.

**FLOW CHART NO.5**

Picture does not appear normally.

↓

Set the disc on the disc tray, and playback it. (DVD MODE)
Or, playback by selecting the picture in HDD top menu. (HDD MODE)

↓

Are the video signals outputted to each pin of CN1504?

| | | |
|---|---|---|
| CN1504 | 7PIN | VIDEO-Y(I/P)-OUT |
| CN1504 | 1PIN | VIDEO-Y(I)-OUT |
| CN1504 | 3PIN | VIDEO-Cr/Pr-OUT |
| CN1504 | 5PIN | VIDEO-Cb/Pb-OUT |
| CN1504 | 9PIN | VIDEO-C-OUT |

No → Replace the DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.

↓ Yes

Are the video signals shown above inputted into each pin of IC1506?

| | | |
|---|---|---|
| IC1506 | 51PIN | VIDEO-Y(I/P)-OUT |
| IC1506 | 55PIN | VIDEO-Y(I)-OUT |
| IC1506 | 52PIN | VIDEO-Cr/Pr-OUT |
| IC1506 | 53PIN | VIDEO-Cb/Pb-OUT |
| IC1506 | 57PIN | VIDEO-C-OUT |

No → Check the line between each pin of CN1504 and each pin of IC1506, and service it if defective.

| | | | |
|---|---|---|---|
| CN1504 | 7PIN → IC1506 | 51PIN | VIDEO-Y(I/P)-OUT |
| CN1504 | 1PIN → IC1506 | 55PIN | VIDEO-Y(I)-OUT |
| CN1504 | 3PIN → IC1506 | 52PIN | VIDEO-Cr/Pr-OUT |
| CN1504 | 5PIN → IC1506 | 53PIN | VIDEO-Cb/Pb-OUT |
| CN1504 | 9PIN → IC1506 | 57PIN | VIDEO-C-OUT |

↓ Yes

Are the video signals outputted to each pin of IC1506?

| | | |
|---|---|---|
| IC1506 | 36PIN | Y-OUT |
| IC1506 | 34PIN | C-OUT |
| IC1506 | 30PIN | VIDEO-OUT 1 (AV1) |
| IC1506 | 22PIN | VIDEO-OUT 2 (AV2) |

No → Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?

↓ Yes → Replace IC1506.

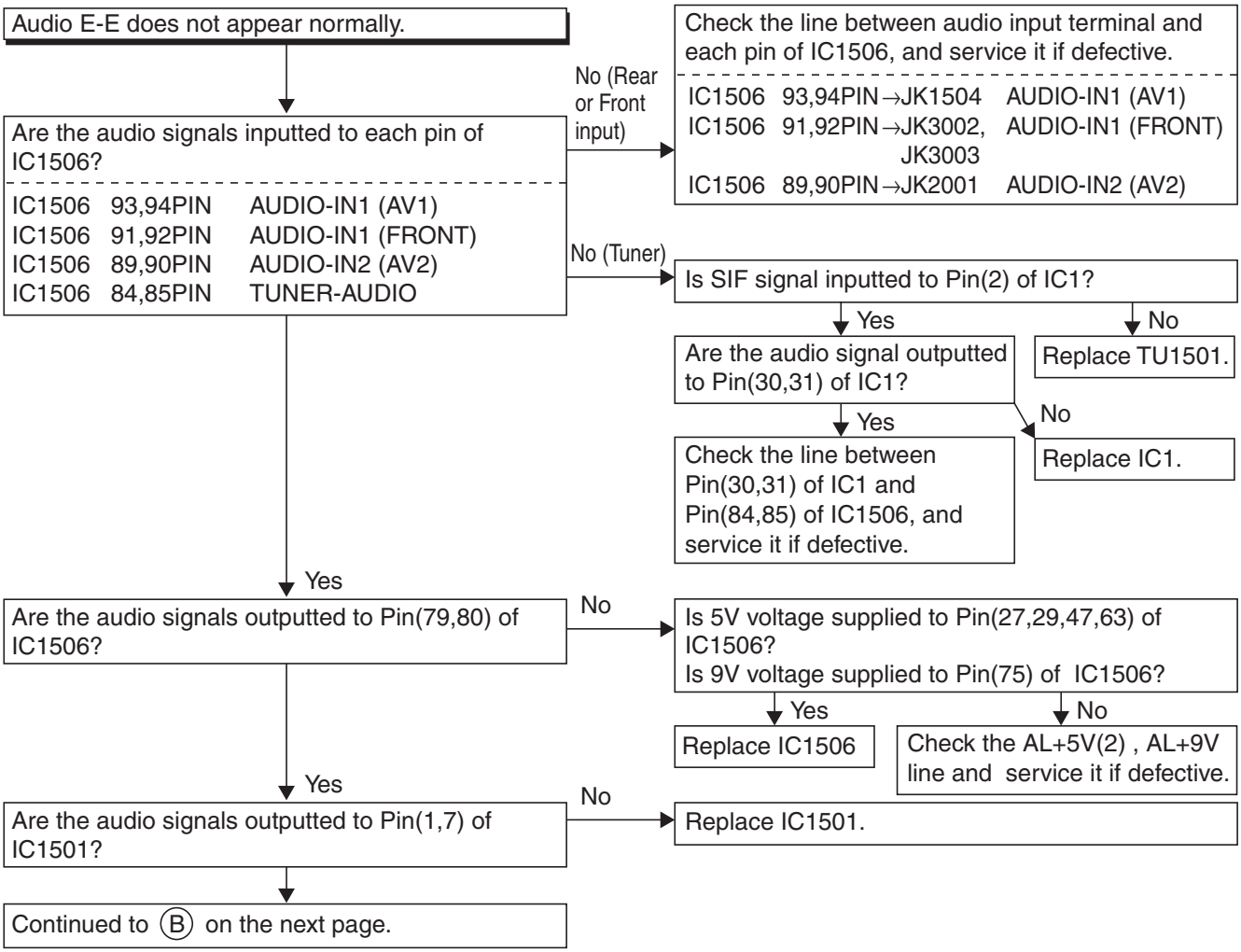
↓ No → Check the AL+5V(2) , AL+9V line and service it if defective.

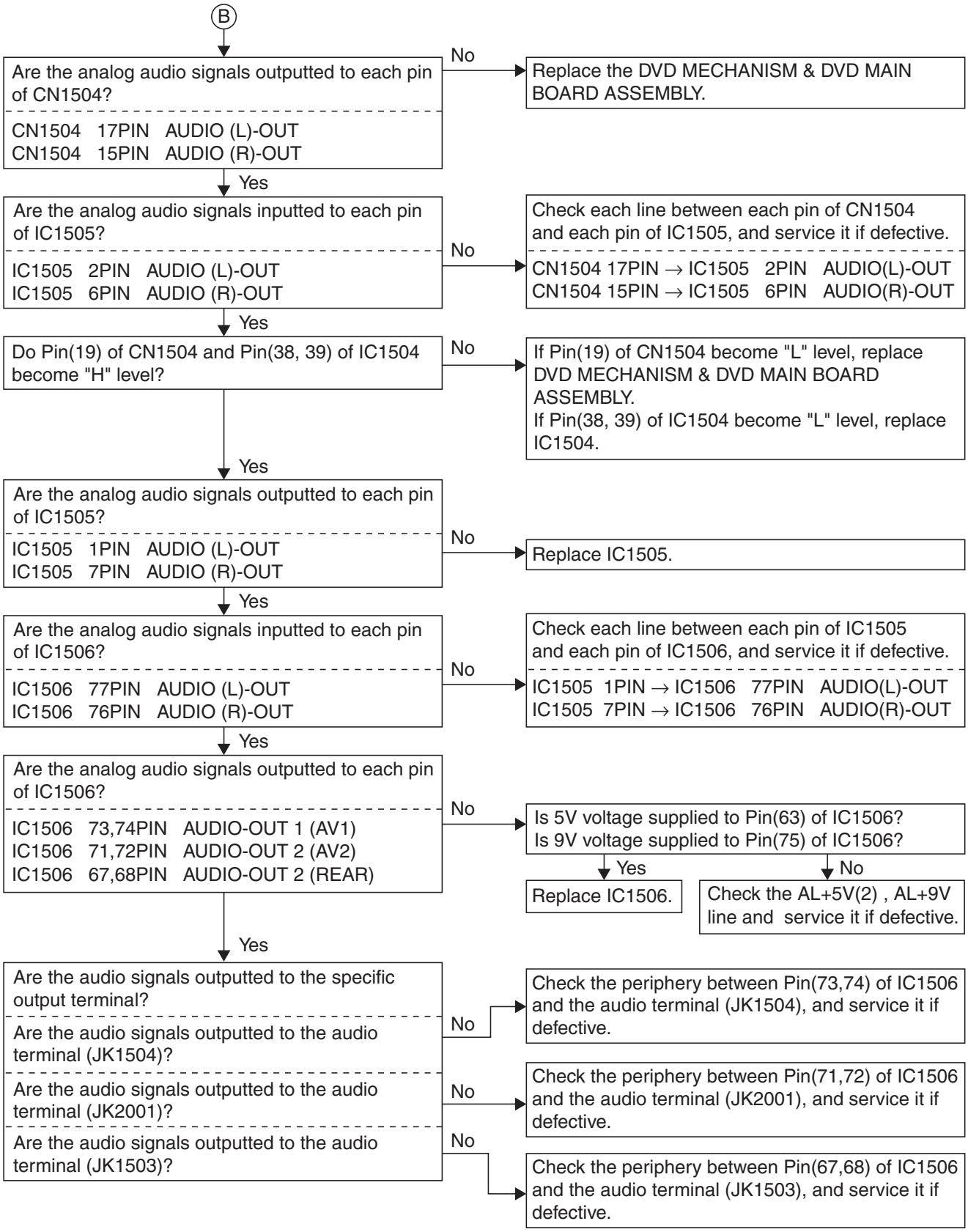
↓ Yes

Are the video signals outputted to the specific output terminal?

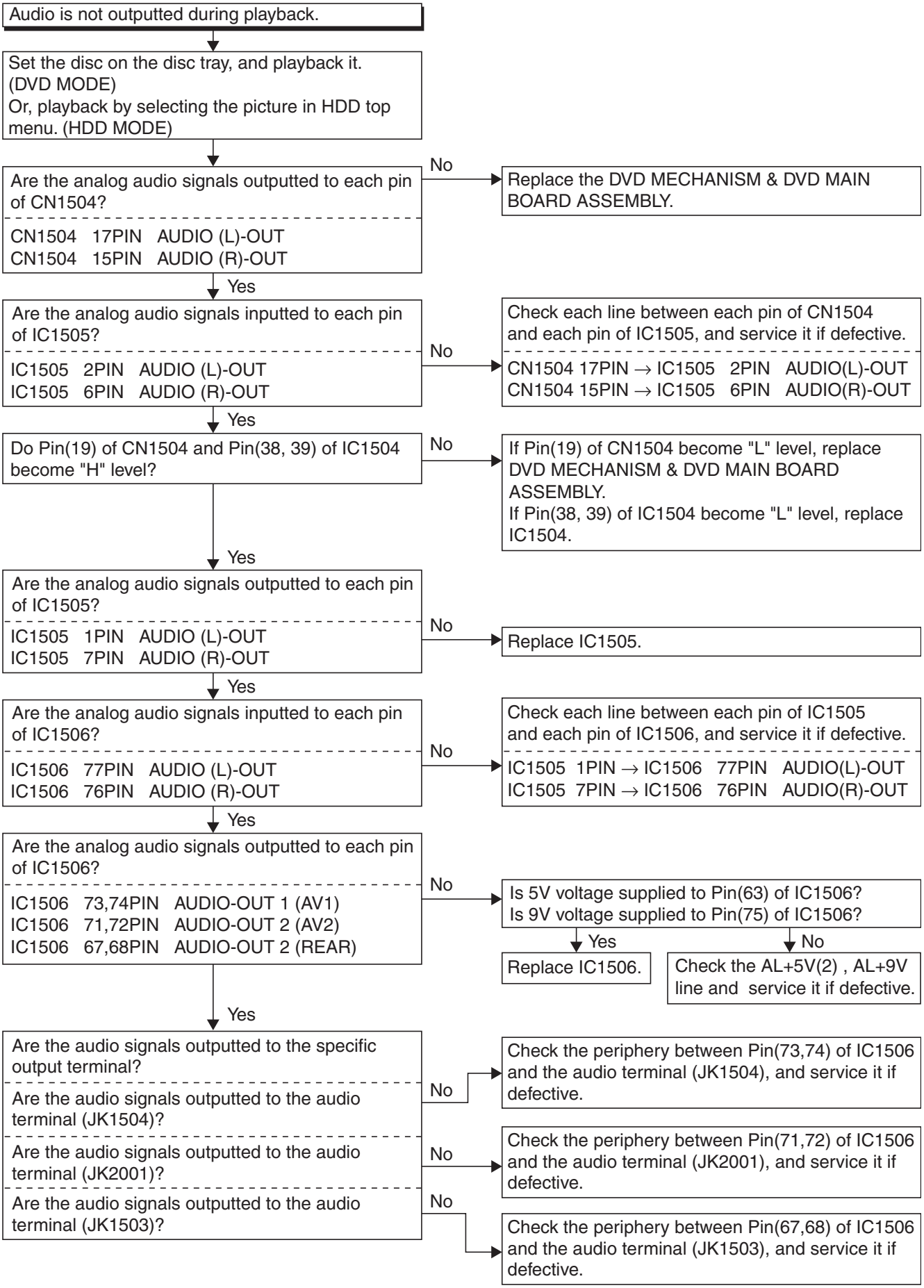
| | |
|---|---|
| Are the luminance signals outputted to the S-VIDEO OUT terminal (JK1505)? | No → Check the periphery of JK1505 from Pin (36) of IC1506 and service it if defective. |
| Are the chroma signals outputted to the S-VIDEO OUT terminal (JK1505)? | No → Check the periphery of JK1505 from Pin (34) of IC1506 and service it if defective. |
| Are the composite video signals outputted to the VIDEO OUT (AV1) terminal (JK1504)? | No → Check the periphery of JK1504 from Pin (30) of IC1506 and service it if defective. |
| Are the composite video signals outputted to the VIDEO OUT (AV2) terminal (JK2001)? | No → Check the periphery of JK2001 from Pin (22) of IC1506 and service it if defective. |

**FLOW CHART NO.6**


Audio E-E does not appear normally.
Are the audio signals inputted to each pin of IC1506?
IC1506 93,94PIN AUDIO-IN1 (AV1)
IC1506 91,92PIN AUDIO-IN1 (FRONT)
IC1506 89,90PIN AUDIO-IN2 (AV2)
IC1506 84,85PIN TUNER-AUDIO
No (Rear or Front input)
Check the line between audio input terminal and each pin of IC1506, and service it if defective.
IC1506 93,94PIN→JK1504 AUDIO-IN1 (AV1)
IC1506 91,92PIN→JK3002, JK3003 AUDIO-IN1 (FRONT)
IC1506 89,90PIN→JK2001 AUDIO-IN2 (AV2)
No (Tuner)
Is SIF signal inputted to Pin(2) of IC1?
Yes
No
Replace TU1501.
Are the audio signal outputted to Pin(30,31) of IC1?
Yes
No
Replace IC1.
Check the line between Pin(30,31) of IC1 and Pin(84,85) of IC1506, and service it if defective.
Yes
Are the audio signals outputted to Pin(79,80) of IC1506?
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
No
Replace IC1506
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Are the audio signals outputted to Pin(1,7) of IC1501?
No
Replace IC1501.
Continued to Ⓑ on the next page.


B
Are the analog audio signals outputted to each pin of CN1504?
CN1504 17PIN AUDIO (L)-OUT
CN1504 15PIN AUDIO (R)-OUT
No
Replace the DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.
Yes
Are the analog audio signals inputted to each pin of IC1505?
IC1505 2PIN AUDIO (L)-OUT
IC1505 6PIN AUDIO (R)-OUT
No
Check each line between each pin of CN1504 and each pin of IC1505, and service it if defective.
CN1504 17PIN → IC1505 2PIN AUDIO(L)-OUT
CN1504 15PIN → IC1505 6PIN AUDIO(R)-OUT
Yes
Do Pin(19) of CN1504 and Pin(38, 39) of IC1504 become "H" level?
No
If Pin(19) of CN1504 become "L" level, replace DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.
If Pin(38, 39) of IC1504 become "L" level, replace IC1504.
Yes
Are the analog audio signals outputted to each pin of IC1505?
IC1505 1PIN AUDIO (L)-OUT
IC1505 7PIN AUDIO (R)-OUT
No
Replace IC1505.
Yes
Are the analog audio signals inputted to each pin of IC1506?
IC1506 77PIN AUDIO (L)-OUT
IC1506 76PIN AUDIO (R)-OUT
No
Check each line between each pin of IC1505 and each pin of IC1506, and service it if defective.
IC1505 1PIN → IC1506 77PIN AUDIO(L)-OUT
IC1505 7PIN → IC1506 76PIN AUDIO(R)-OUT
Yes
Are the analog audio signals outputted to each pin of IC1506?
IC1506 73,74PIN AUDIO-OUT 1 (AV1)
IC1506 71,72PIN AUDIO-OUT 2 (AV2)
IC1506 67,68PIN AUDIO-OUT 2 (REAR)
No
Is 5V voltage supplied to Pin(63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
Replace IC1506.
No
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Are the audio signals outputted to the specific output terminal?
Are the audio signals outputted to the audio terminal (JK1504)?
No
Check the periphery between Pin(73,74) of IC1506 and the audio terminal (JK1504), and service it if defective.
Are the audio signals outputted to the audio terminal (JK2001)?
No
Check the periphery between Pin(71,72) of IC1506 and the audio terminal (JK2001), and service it if defective.
Are the audio signals outputted to the audio terminal (JK1503)?
No
Check the periphery between Pin(67,68) of IC1506 and the audio terminal (JK1503), and service it if defective.

**FLOW CHART NO.7**


Audio is not outputted during playback.
Set the disc on the disc tray, and playback it.
(DVD MODE)
Or, playback by selecting the picture in HDD top menu. (HDD MODE)
Are the analog audio signals outputted to each pin of CN1504?
CN1504 17PIN AUDIO (L)-OUT
CN1504 15PIN AUDIO (R)-OUT
No
Replace the DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.
Yes
Are the analog audio signals inputted to each pin of IC1505?
IC1505 2PIN AUDIO (L)-OUT
IC1505 6PIN AUDIO (R)-OUT
No
Check each line between each pin of CN1504 and each pin of IC1505, and service it if defective.
CN1504 17PIN → IC1505 2PIN AUDIO(L)-OUT
CN1504 15PIN → IC1505 6PIN AUDIO(R)-OUT
Yes
Do Pin(19) of CN1504 and Pin(38, 39) of IC1504 become "H" level?
No
If Pin(19) of CN1504 become "L" level, replace DVD MECHANISM & DVD MAIN BOARD ASSEMBLY.
If Pin(38, 39) of IC1504 become "L" level, replace IC1504.
Yes
Are the analog audio signals outputted to each pin of IC1505?
IC1505 1PIN AUDIO (L)-OUT
IC1505 7PIN AUDIO (R)-OUT
No
Replace IC1505.
Yes
Are the analog audio signals inputted to each pin of IC1506?
IC1506 77PIN AUDIO (L)-OUT
IC1506 76PIN AUDIO (R)-OUT
No
Check each line between each pin of IC1505 and each pin of IC1506, and service it if defective.
IC1505 1PIN → IC1506 77PIN AUDIO(L)-OUT
IC1505 7PIN → IC1506 76PIN AUDIO(R)-OUT
Yes
Are the analog audio signals outputted to each pin of IC1506?
IC1506 73,74PIN AUDIO-OUT 1 (AV1)
IC1506 71,72PIN AUDIO-OUT 2 (AV2)
IC1506 67,68PIN AUDIO-OUT 2 (REAR)
No
Is 5V voltage supplied to Pin(63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
Replace IC1506.
No
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Are the audio signals outputted to the specific output terminal?
Are the audio signals outputted to the audio terminal (JK1504)?
No
Check the periphery between Pin(73,74) of IC1506 and the audio terminal (JK1504), and service it if defective.
Are the audio signals outputted to the audio terminal (JK2001)?
No
Check the periphery between Pin(71,72) of IC1506 and the audio terminal (JK2001), and service it if defective.
Are the audio signals outputted to the audio terminal (JK1503)?
No
Check the periphery between Pin(67,68) of IC1506 and the audio terminal (JK1503), and service it if defective.

# 3 VCR Section

**FLOW CHART NO.1**

The key operation is not functioning.

↓

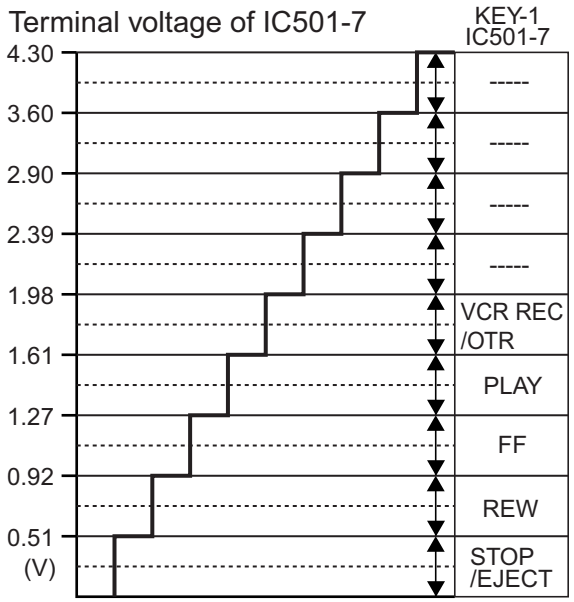
Are the contact point and the installation state of the key switches normal? — No → Re-install some key switches correctly or replace some key switches.

↓ Yes

Is the control voltage normally inputted into Pin(7) of IC501? — No → Check the key switches and their periphery, and service it if defective.

↓ Yes

Replace IC501.




**FLOW CHART NO.2**

No VCR operation is possible from the remote control unit. (Operation is possible from the unit.)

↓

Is 5V voltage supplied to the Pin(3) terminal of the RM1501 (remote control receiver)? — No → Check AL+5V line and service it if defective.

↓ Yes

Is the "L" pulse sent out from Pin(1) terminal of the RM1501 (remote control receiver) when the remote control unit is activated? — No → Replace the RM1501 (remote control receiver). Replace remote control unit if need.

↓ Yes

Is the "L" pulse signal supplied to Pin(14) of IC501? — No → Check the line between the RM1501 (remote control receiver) and Pin(14) of IC501, and service it if defective.

↓ Yes

Replace IC501.

**FLOW CHART NO.3**

Cassette tape can not be loaded.

↓

When loading a cassette tape, on Pin(10) of IC501, does the "L" pulse switch to the "H" pulse?

No → Check the line between the start sensor and Pin(10) of IC501, and service it if defective.

↓ Yes

When loading a cassette tape, is the specified voltage (approximately 13V) outputted to the terminal of the Loading Motor Unit?

No → Replace the Capstan Motor Unit.

↓ Yes

Replace the Loading Motor Unit.

**FLOW CHART NO.4**

Cassette tape is ejected right after the loading.

↓

When loading a cassette tape, on Pin(10) of IC501, does the "L" pulse switch to the "H" pulse?

No → Check the line between the start sensor and Pin(10) of IC501, and service it if defective.

↓ Yes

When loading a cassette tape, on Pin(4) of IC501, does the "L" pulse switch to the "H" pulse?

No → Check the line between the end sensor and Pin(4) of IC501, and service it if defective.

↓ Yes

When loading a cassette tape, does the LD-SW operate normally?

No → Check the line between the LD-SW(SW507) and Pin(9) of IC501, and service it if defective.

↓ Yes

Replace IC501.

**FLOW CHART NO.5**

Cassette tape can not be ejected.

↓

When pressing the eject button, does the Capstan Motor start rotating?

No → Refer to "FLOW CHART NO.6 " <The Capstan Motor does not rotate>.

↓ Yes

While the Capstan Motor is rotating, is the Takeup Reel rotating?

No → Check the Reel Disc or Clutch Assembly, and service it if defective.

↓ Yes

While the Takeup Reel is rotating, is the reel pulse signal inputted to Pin(80) of IC501?

No → Check the line between the Takeup Reel sensor and Pin(80) of IC501, and service it if defective.

↓ Yes

While the reel pulse signal is inputting, is "L" pulse outputted to Pin(81) of IC501?

No → Replace IC501.

↓ Yes

Is the specified voltage (approximately 13V) outputted to the terminal of the Lading Motor Unit?

No → Replace the Capstan Motor unit.

↓ Yes

Is the Loading Motor rotating?

No → Replace the Loading Motor unit.

↓ Yes

Check the Cam Gear or Rack Assembly, etc., and service it if defective.

**FLOW CHART NO.6**

Capstan Motor does not rotate.

↓

Is 5V voltage supplied to Pin(2) of CN502? — No → Check the P-ON+5V line and service it if defective.

↓ Yes

Is over approximately 2.6V voltage supplied to Pin(5) of CN502? — No → Check the line between Pin(5) of CN502 and Pin(76) of IC501, and service it if defective.

↓ Yes

Is 12V voltage supplied to Pin(1,11) of CN502? — No → Check the AL+12V and AL+16V/+12V line, and service it if defective.

↓ Yes

Replace the Capstan Motor Unit.

**FLOW CHART NO.7**

Drum Motor does not rotate.

↓

Is 5V voltage supplied to Pin(2) of CN502? — No → Check the P-ON+5V line and service it if defective.

↓ Yes

Is over approximately 2.6V voltage supplied to Pin(8) of CN502? — No → Check the line between Pin(8) of CN502 and Pin(77) of IC501, and service it if defective.

↓ Yes

Is 12V voltage supplied at Pin(1,11) of CN502? — No → Check the AL+12V and AL+16V/+12V line, and service it if defective.

↓ Yes

Replace the Capstan Motor Unit or Cylinder Assembly.

**FLOW CHART NO.8**

Drum Motor rotates only for a few seconds.

↓

Is the drum PG/FG signal inputted to Pin(90) of IC501? — No → Replace the Capstan Motor Unit or the Cylinder Assembly.

↓ Yes

Is the RF-SW signal outputted to Pin(18) of IC501? — No → Replace IC501.

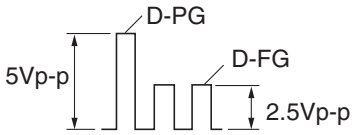
↓ Yes

Is 12V voltage supplied Pin(1,11) of CN 502? — No → Check the AL+12V and AL+16V/+12V line, and service it if defective.

↓ Yes

Replace the Capstan Motor Unit or the Cylinder Assembly.

**FLOW CHART NO.9**




RF-SW signal is not outputted.

↓

Is the Drum Motor rotating? — No → Refer to "FLOW CHART NO.7" <Drum Motor does not rotate> and "FLOW CHART NO.8" <Drum Motor rotates only for a few seconds>.

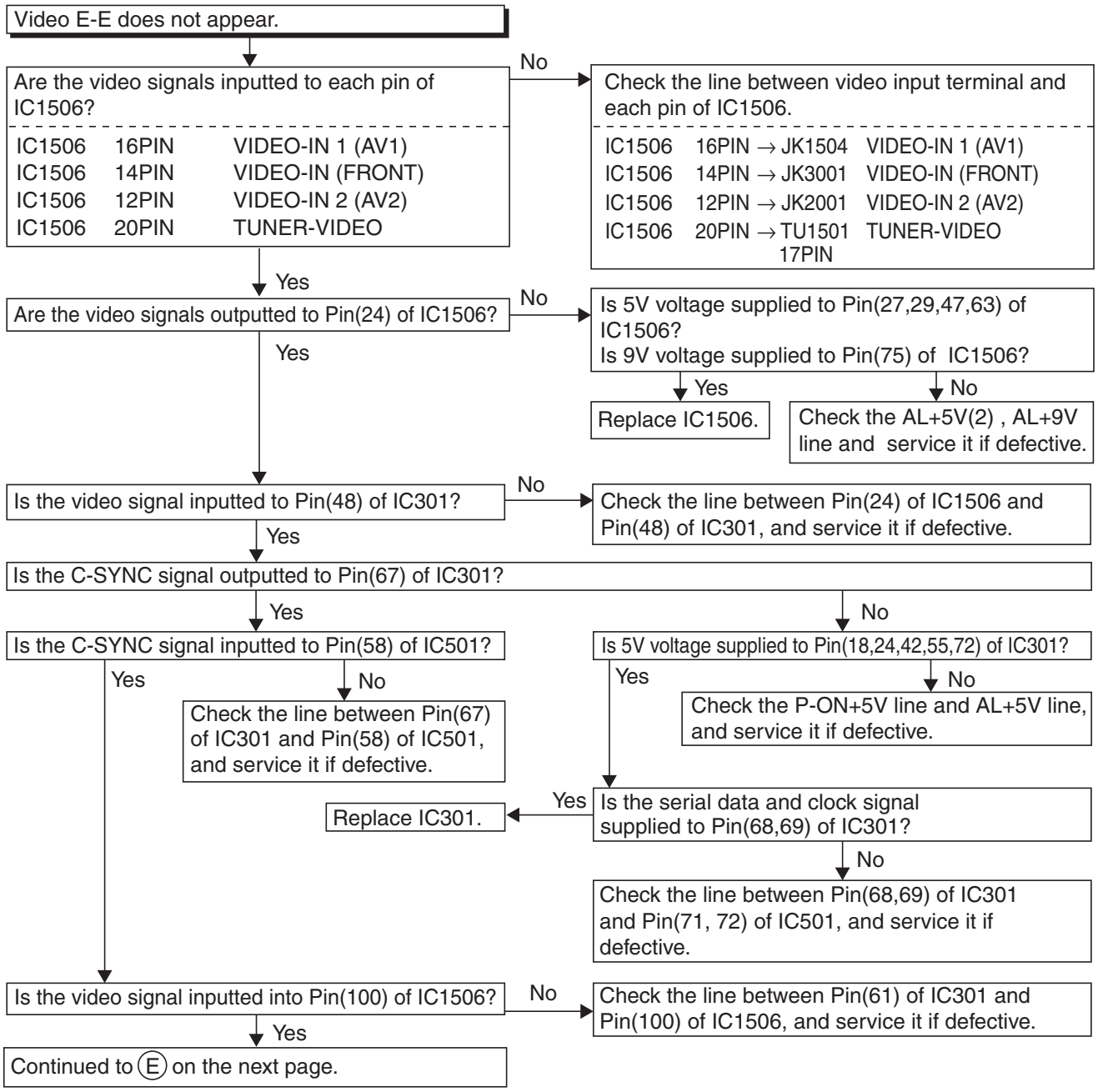
↓ Yes

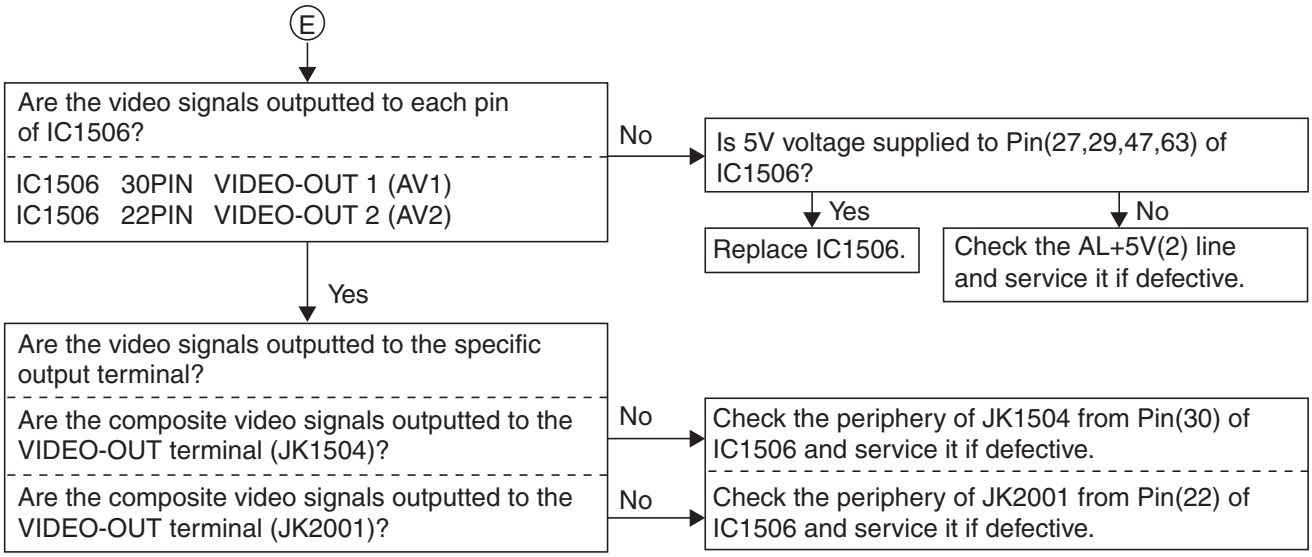
Is the drum PG/FG signal inputted to Pin(90) of IC501? — No → Replace the Capstan Motor Unit or the Cylinder Assembly.

↓ Yes

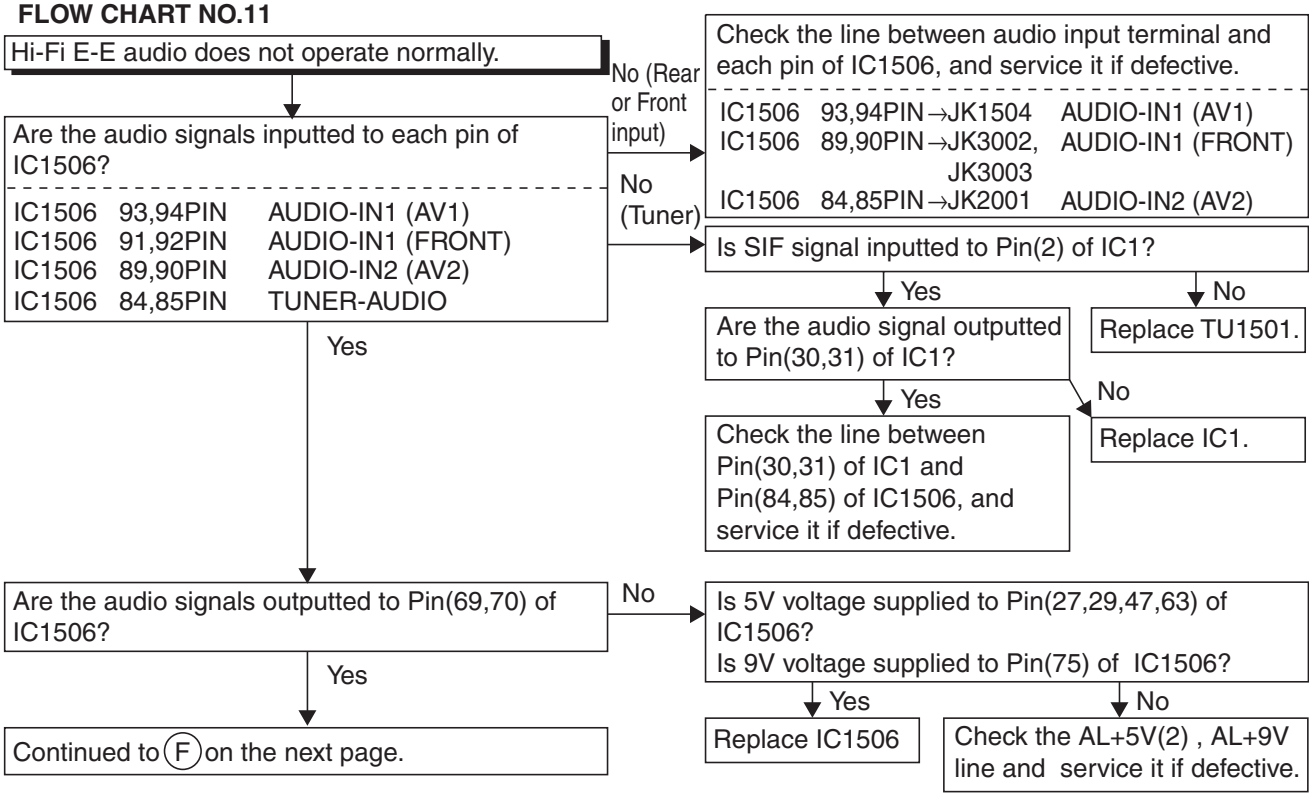
Replace IC501.

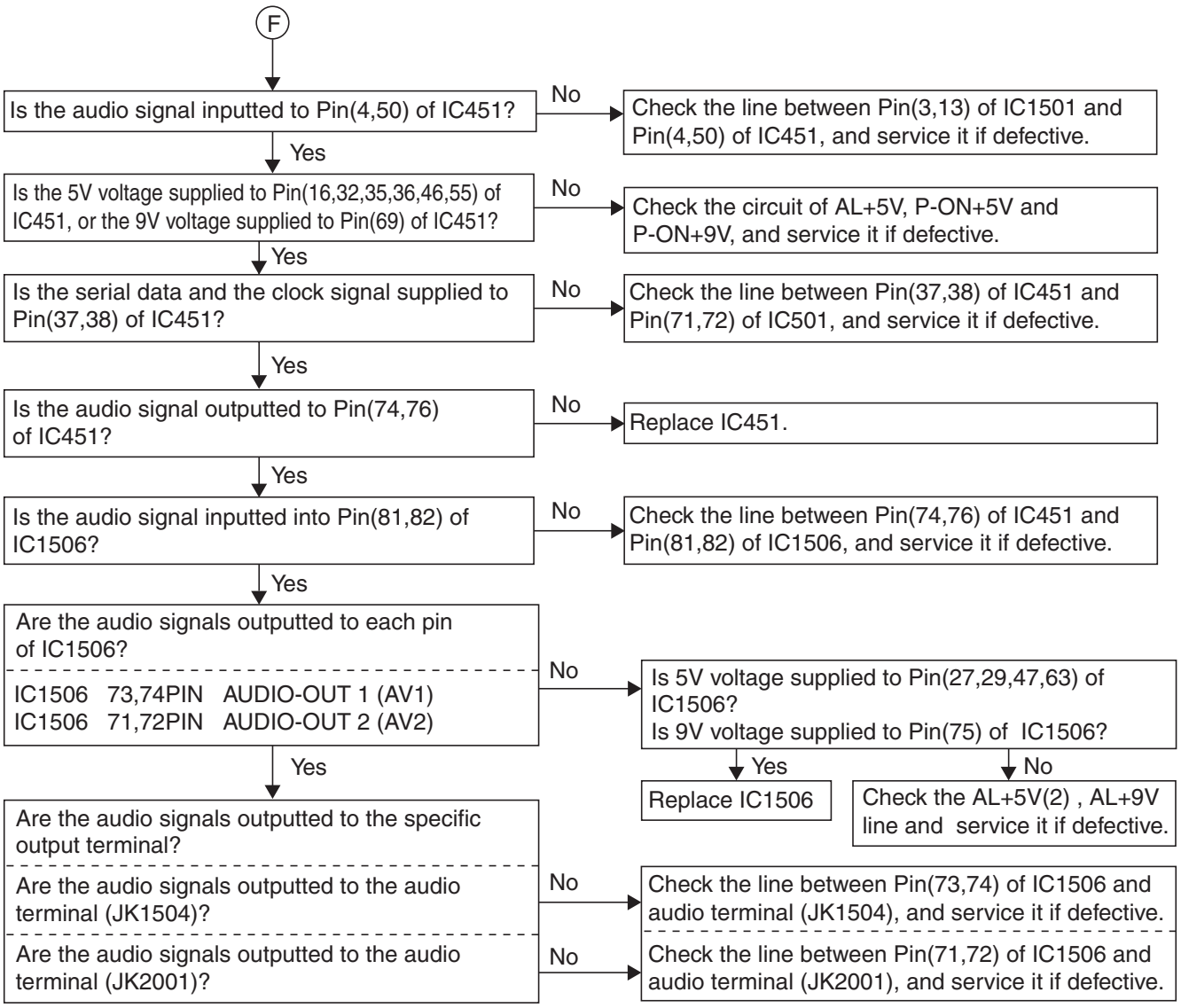
**FLOW CHART NO.10**


Video E-E does not appear.
Are the video signals inputted to each pin of IC1506?
IC1506 16PIN VIDEO-IN 1 (AV1)
IC1506 14PIN VIDEO-IN (FRONT)
IC1506 12PIN VIDEO-IN 2 (AV2)
IC1506 20PIN TUNER-VIDEO
No
Check the line between video input terminal and each pin of IC1506.
IC1506 16PIN → JK1504 VIDEO-IN 1 (AV1)
IC1506 14PIN → JK3001 VIDEO-IN (FRONT)
IC1506 12PIN → JK2001 VIDEO-IN 2 (AV2)
IC1506 20PIN → TU1501 17PIN TUNER-VIDEO
Yes
Are the video signals outputted to Pin(24) of IC1506?
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
No
Replace IC1506.
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Is the video signal inputted to Pin(48) of IC301?
No
Check the line between Pin(24) of IC1506 and Pin(48) of IC301, and service it if defective.
Yes
Is the C-SYNC signal outputted to Pin(67) of IC301?
Yes
No
Is the C-SYNC signal inputted to Pin(58) of IC501?
Is 5V voltage supplied to Pin(18,24,42,55,72) of IC301?
Yes
No
Check the line between Pin(67) of IC301 and Pin(58) of IC501, and service it if defective.
Yes
No
Check the P-ON+5V line and AL+5V line, and service it if defective.
Yes
Is the serial data and clock signal supplied to Pin(68,69) of IC301?
Replace IC301.
No
Check the line between Pin(68,69) of IC301 and Pin(71, 72) of IC501, and service it if defective.
Is the video signal inputted into Pin(100) of IC1506?
No
Check the line between Pin(61) of IC301 and Pin(100) of IC1506, and service it if defective.
Yes
Continued to Ⓔ on the next page.


E
Are the video signals outputted to each pin of IC1506?
IC1506 30PIN VIDEO-OUT 1 (AV1)
IC1506 22PIN VIDEO-OUT 2 (AV2)
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Yes
No
Replace IC1506.
Check the AL+5V(2) line and service it if defective.
Yes
Are the video signals outputted to the specific output terminal?
Are the composite video signals outputted to the VIDEO-OUT terminal (JK1504)?
No
Check the periphery of JK1504 from Pin(30) of IC1506 and service it if defective.
Are the composite video signals outputted to the VIDEO-OUT terminal (JK2001)?
No
Check the periphery of JK2001 from Pin(22) of IC1506 and service it if defective.

**FLOW CHART NO.11**


Hi-Fi E-E audio does not operate normally.
Are the audio signals inputted to each pin of IC1506?
IC1506 93,94PIN AUDIO-IN1 (AV1)
IC1506 91,92PIN AUDIO-IN1 (FRONT)
IC1506 89,90PIN AUDIO-IN2 (AV2)
IC1506 84,85PIN TUNER-AUDIO
No (Rear or Front input)
Check the line between audio input terminal and each pin of IC1506, and service it if defective.
IC1506 93,94PIN→JK1504 AUDIO-IN1 (AV1)
IC1506 89,90PIN→JK3002, JK3003 AUDIO-IN1 (FRONT)
IC1506 84,85PIN→JK2001 AUDIO-IN2 (AV2)
No (Tuner)
Is SIF signal inputted to Pin(2) of IC1?
Yes
No
Replace TU1501.
Are the audio signal outputted to Pin(30,31) of IC1?
Yes
No
Replace IC1.
Check the line between Pin(30,31) of IC1 and Pin(84,85) of IC1506, and service it if defective.
Yes
Are the audio signals outputted to Pin(69,70) of IC1506?
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
No
Replace IC1506
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Continued to F on the next page.


F
Is the audio signal inputted to Pin(4,50) of IC451?
No
Check the line between Pin(3,13) of IC1501 and Pin(4,50) of IC451, and service it if defective.
Yes
Is the 5V voltage supplied to Pin(16,32,35,36,46,55) of IC451, or the 9V voltage supplied to Pin(69) of IC451?
No
Check the circuit of AL+5V, P-ON+5V and P-ON+9V, and service it if defective.
Yes
Is the serial data and the clock signal supplied to Pin(37,38) of IC451?
No
Check the line between Pin(37,38) of IC451 and Pin(71,72) of IC501, and service it if defective.
Yes
Is the audio signal outputted to Pin(74,76) of IC451?
No
Replace IC451.
Yes
Is the audio signal inputted into Pin(81,82) of IC1506?
No
Check the line between Pin(74,76) of IC451 and Pin(81,82) of IC1506, and service it if defective.
Yes
Are the audio signals outputted to each pin of IC1506?
IC1506 73,74PIN AUDIO-OUT 1 (AV1)
IC1506 71,72PIN AUDIO-OUT 2 (AV2)
No
Is 5V voltage supplied to Pin(27,29,47,63) of IC1506?
Is 9V voltage supplied to Pin(75) of IC1506?
Yes
No
Replace IC1506
Check the AL+5V(2) , AL+9V line and service it if defective.
Yes
Are the audio signals outputted to the specific output terminal?
Are the audio signals outputted to the audio terminal (JK1504)?
No
Check the line between Pin(73,74) of IC1506 and audio terminal (JK1504), and service it if defective.
Are the audio signals outputted to the audio terminal (JK2001)?
No
Check the line between Pin(71,72) of IC1506 and audio terminal (JK2001), and service it if defective.

**FLOW CHART NO.12**

Hi-Fi audio can not be recorded normally. (E-E mode is normal.)

↓

Is the REC FM signal outputted to Pin(26) of IC451? — No → Replace IC451.

↓ Yes

Is the line between Pin(8) of CN251 and Pin(26) of IC451 normal? — No → Check the line between Pin(8) of CN251 and Pin(26) of IC451, and service it if defective.

↓ Yes

Replace the Cylinder Assembly.

**FLOW CHART NO.13**

Hi-Fi audio can not be playbacked normally. (Hi-Fi E-E mode is normal.)

↓

Is the Playback Envelope signal outputted to Pin(33) of IC451? — No → Is the Hi-Fi-H-SW signal inputted into to Pin(39) of IC451?

↓ Yes

Replace IC451.

Is the Hi-Fi-H-SW signal inputted into to Pin(39) of IC451?

↓ Yes → Replace IC451.

↓ No → Check the Hi-Fi-H-SW line between Pin(39) of IC451 and Pin(19) of IC501, and service it if defective.

**FLOW CHART NO.14**

Hi-Fi audio can not be recorded normally in the linear audio mode. (E-E mode is normal.)

↓

Is the audio signal inputted into Pin(13) of IC301? — No → Check the line between Pin(78) of IC451 and Pin(13) of IC301, and service it if defective.

↓ Yes

Does the Bias oscillation circuit operate normally? — No → Check the Bias oscillation circuit (Q401,Q403, Q404,Q405,Q406) and service it if defective.

↓ Yes

Is the audio signal outputted to Pin(11) of IC301? — No → Replace IC301.

↓ Yes

Is the audio signal outputted to Pin(100) of IC301? — No → Replace IC301.

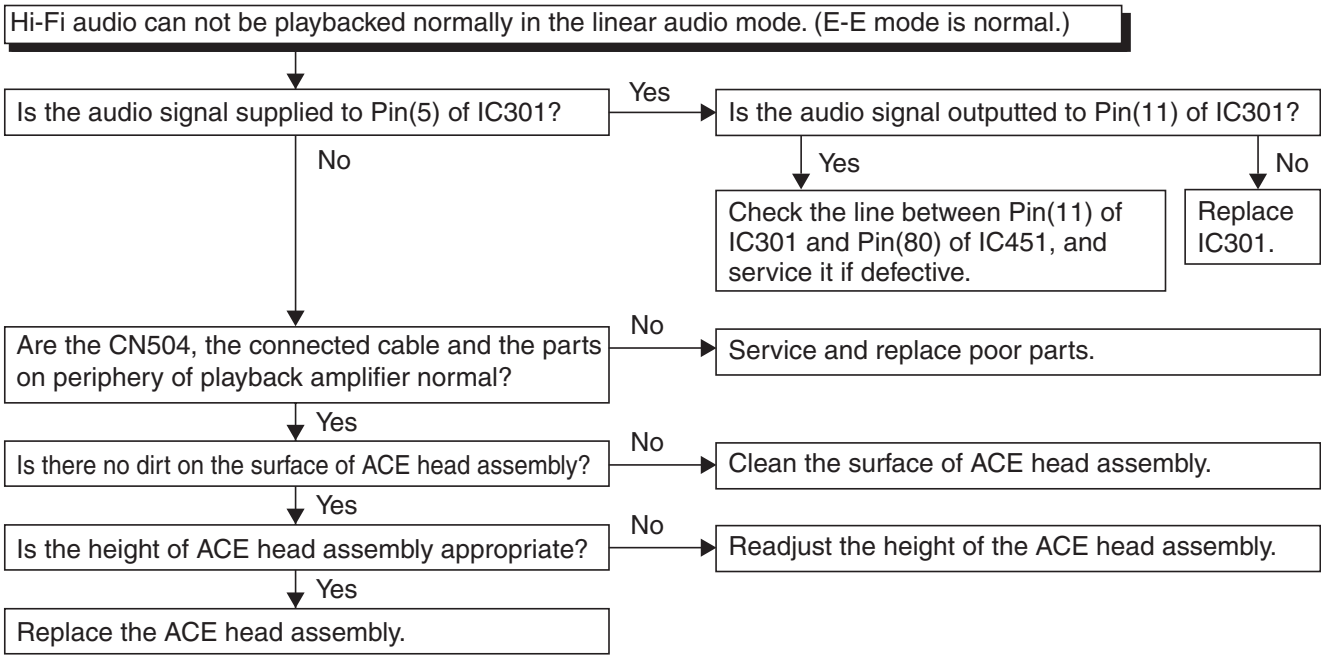
↓ Yes

Is CN504 and the connected cable normal? — No → Replace CN504 and the connected cable.

↓ Yes

Replace ACE head assembly.

**FLOW CHART NO.15**


Hi-Fi audio can not be playbacked normally in the linear audio mode. (E-E mode is normal.)
Is the audio signal supplied to Pin(5) of IC301?
Yes
Is the audio signal outputted to Pin(11) of IC301?
No
Yes
No
Check the line between Pin(11) of IC301 and Pin(80) of IC451, and service it if defective.
Replace IC301.
Are the CN504, the connected cable and the parts on periphery of playback amplifier normal?
No
Service and replace poor parts.
Yes
Is there no dirt on the surface of ACE head assembly?
No
Clean the surface of ACE head assembly.
Yes
Is the height of ACE head assembly appropriate?
No
Readjust the height of the ACE head assembly.
Yes
Replace the ACE head assembly.

# FUNCTION INDICATOR SYMBOLS

## < VCR Section >

**Note:**

If a mechanical malfunction occurs, the power is turned off. The following symbols will appear on the display.

| Status | Display |
|---|---|
| When reel or capstan mechanism is not functioning correctly | "W" blinks. |
| When tape loading mechanism is not functioning correctly | |
| When cassette loading mechanism is not functioning correctly | |
| When the drum is not working properly | |
| P-ON+5V Power safety detection | |
| Fan does not rotate over 30 seconds. | "W" light and "R" blinks. |

When the power comes on again after that by pressing [I/⏻] button, an error message is displayed on the TV screen as follows.

When reel or capstan mechanism is not functioning correctly

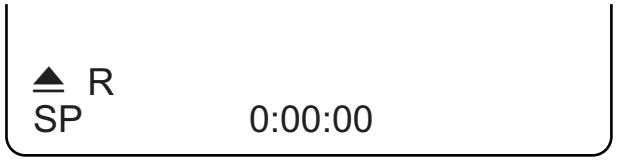



**Fig. 1**

When tape loading mechanism is not functioning correctly

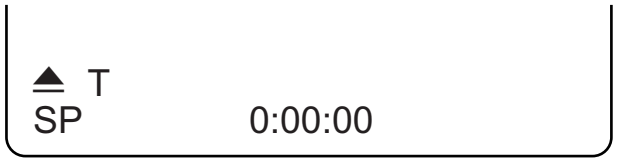



**Fig. 2**

When cassette loading mechanism is not functioning correctly

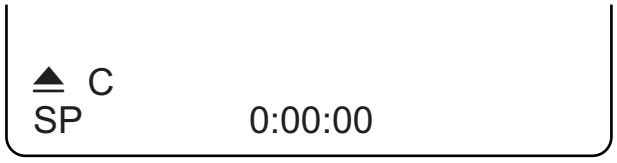



**Fig. 3**

When the drum is not working properly

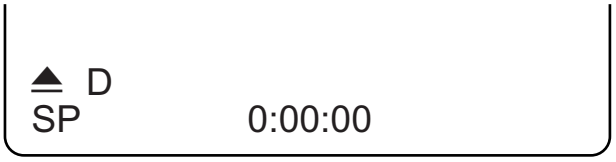



**Fig. 4**

P-ON+5V Power safety detection

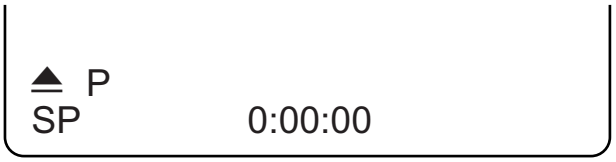
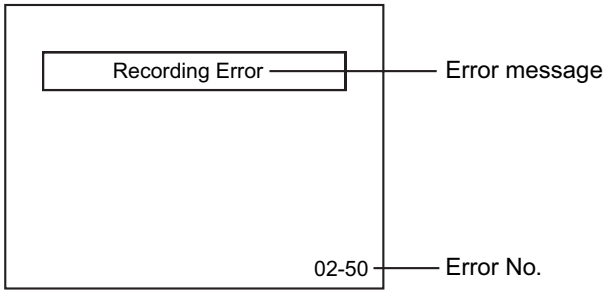



**Fig. 5**

## < DVD/HDD Section >

**Note:** If an error occurs, a message with the error number appears on the screen.

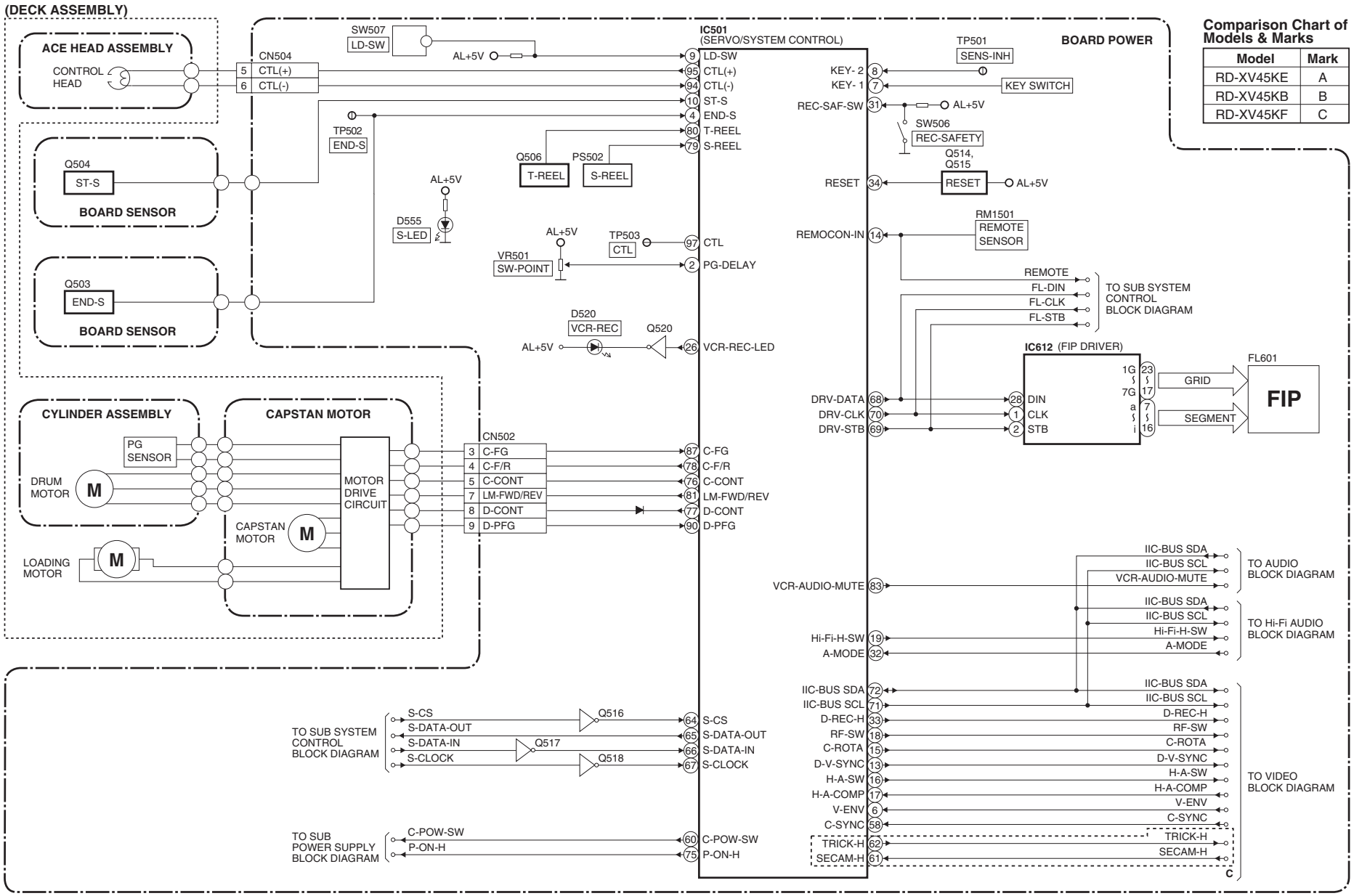



| Message | Error No. | Error Description | Error Example |
|---|---|---|---|
| Disc error | 04-50 | Renewal error at ejecting disc | This code is output when there is a control information writing failure due to tray being open during writing or disc loading. |
| | 04-51 | Disc includes still picture | This code is output upon attempt to write data (finalizing disc protect data, etc.) on a disc including a still picture. |
| Recording error | 03-50 | Recording error caused by media error | This code is output when recording error caused by media error occurs, e.g.,stopping recording during attempting to record on a scratched disc. |
| | 03-52 | Loader error | This code is output when tray open/close error occurs. Also, when the tray open error occurs at F/E and when the recovery fails even if the B/E retries. |
| | 03-53 | Poor media | This code is output when a DVD operation error occurs during copying. |
| | 03-54 | Control information error and control data error | This code is output when a chip (EMMA) outputs unusual data while recording and the control information writing fails. |
| | 03-55 | Writing error (video) | This code is output when video writing fails while copying at high speed. |
| | 03-56 | General error | This code is output when a number of errors occur:<br>Ex.1) When Outplay list creation fails.<br>Ex.2) When the system can't take the title information which should be written on the disc.<br>Ex3) When starting to copy, recording is paused and restarted but, after the recording pause, recording start fails. |
| | 03-57 | Device error | This code is output when an HDD operation error occurs (HDD recording error), while copying at high speed or constant speed. |
| | 03-60 | Unrecordable disc | This code is output when recording is attempted on a non - recordable disc such as a CD or DVD-ROM. |
| System error | 02-50 | Erasing error (all titles) | This code is output when an error occurs erasing entire VR playlist, HDD playlist or HDD originals. |
| | 02-51 | Disc protection failure | This code is output when protected pre-existing information that should be on a disc is missing (VR disc protection error). |
| | 02-52 | Format failure | This code is output when HDD formatting occurs in maintenance mode. |
| | 02-53 | Abnormal loader | This code is output when an appropriate DVD drive is not connected. |
| | 02-54 | Abnormal HDD mount | This code is output when a [PLAY], [STOP], [REC], [MENU] or [LIST] button is pressed while HDD is not functional. |
| | 02-55 | Changing status failure during VCR dubbing | This code is output when, during dubbing from HDD or DVD to VCR, playback cannot be initiated or playback cannot be discontinued. |
| | 02-56 | Abnormal VCR mechanism | This code is output when a VCR mechanism abnormality occurs. After the error message is displayed, the power turns off. |
| | 02-57 | Fan lock | This code is output when fan locking (over 30 seconds) is detected. After the error message is displayed, the power turns off. |
| | 02-58 | F/E hang-up | This code is output when an F/E hang-up event occurs. After the error message is displayed, the power turns off. |
| | 02-59 | HDD hang-up | This code is output when HDD hang-up event occurs. After the error message is displayed, the power turns off. |

# BLOCK DIAGRAMS

## Servo/System Control Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

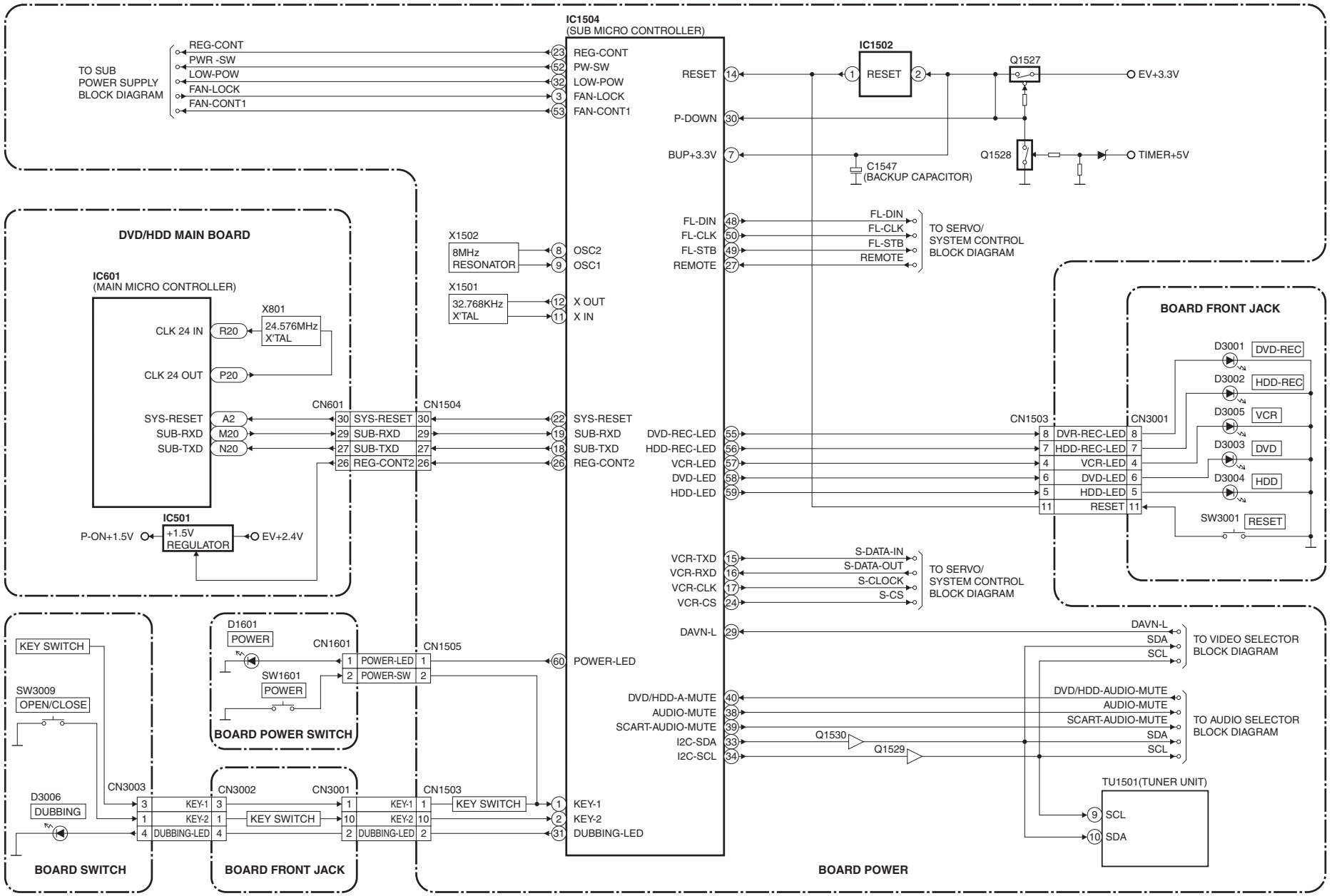



**Comparison Chart of Models & Marks**

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

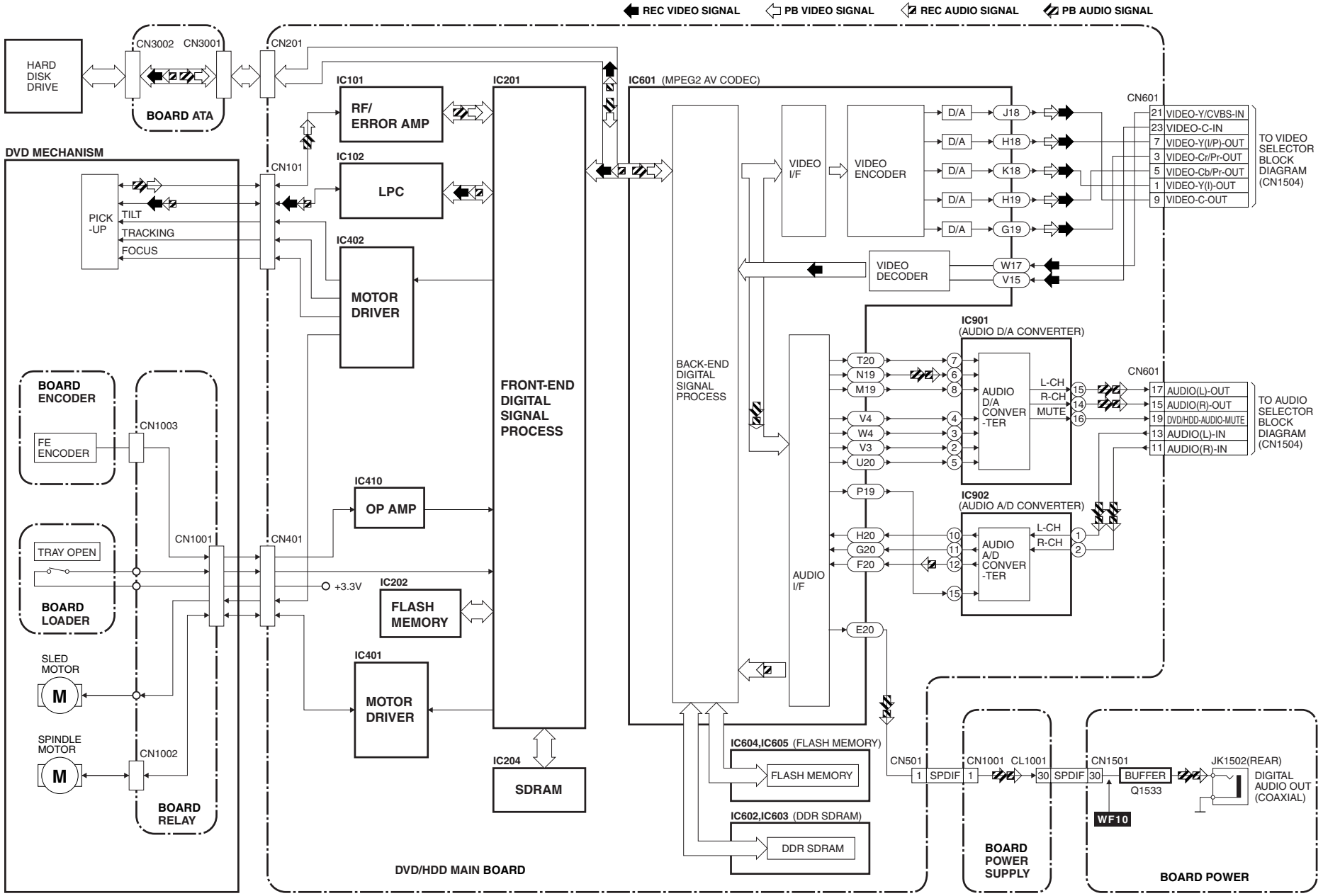
# Sub System Control Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



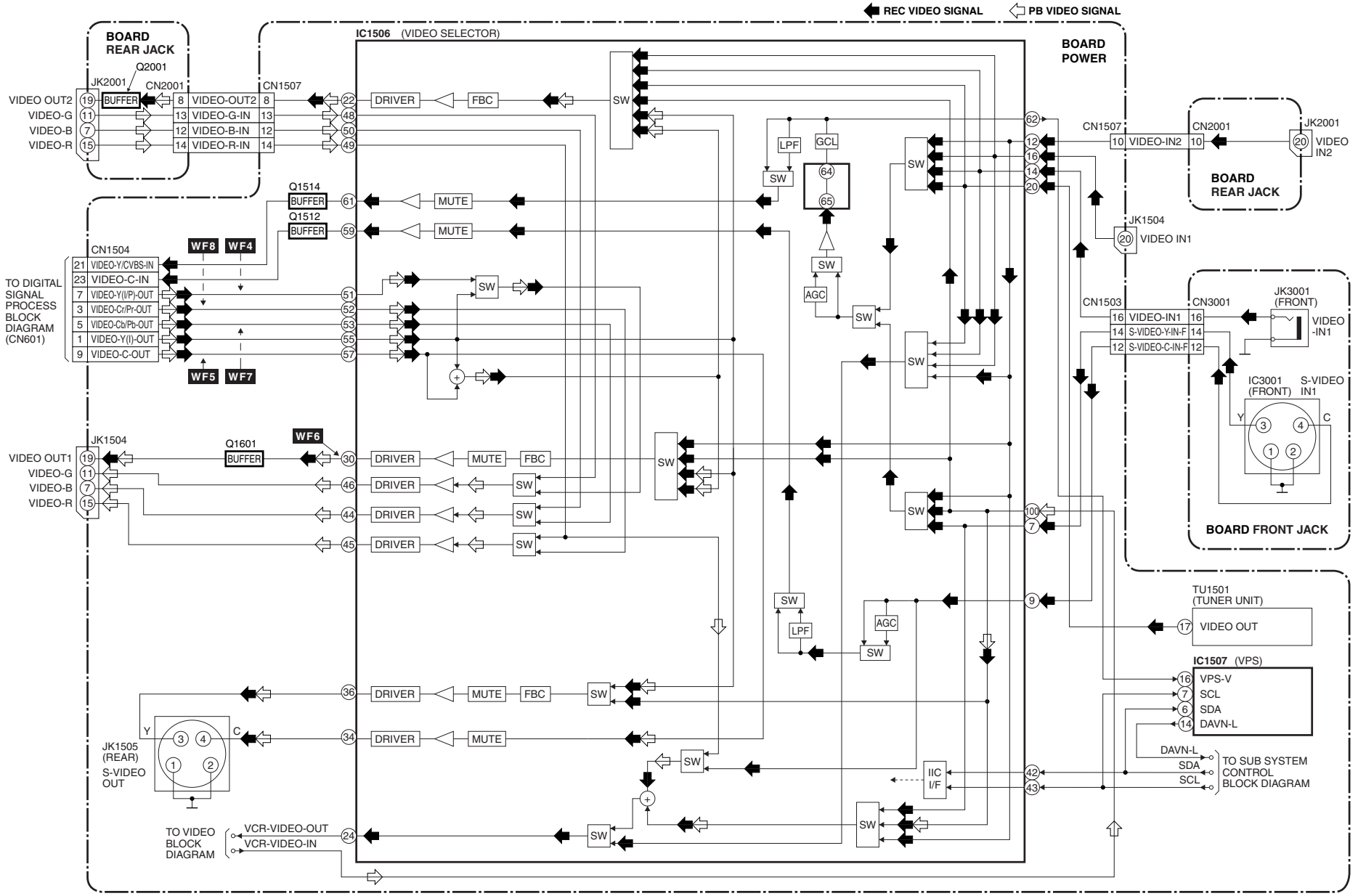
# Digital Signal Process Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



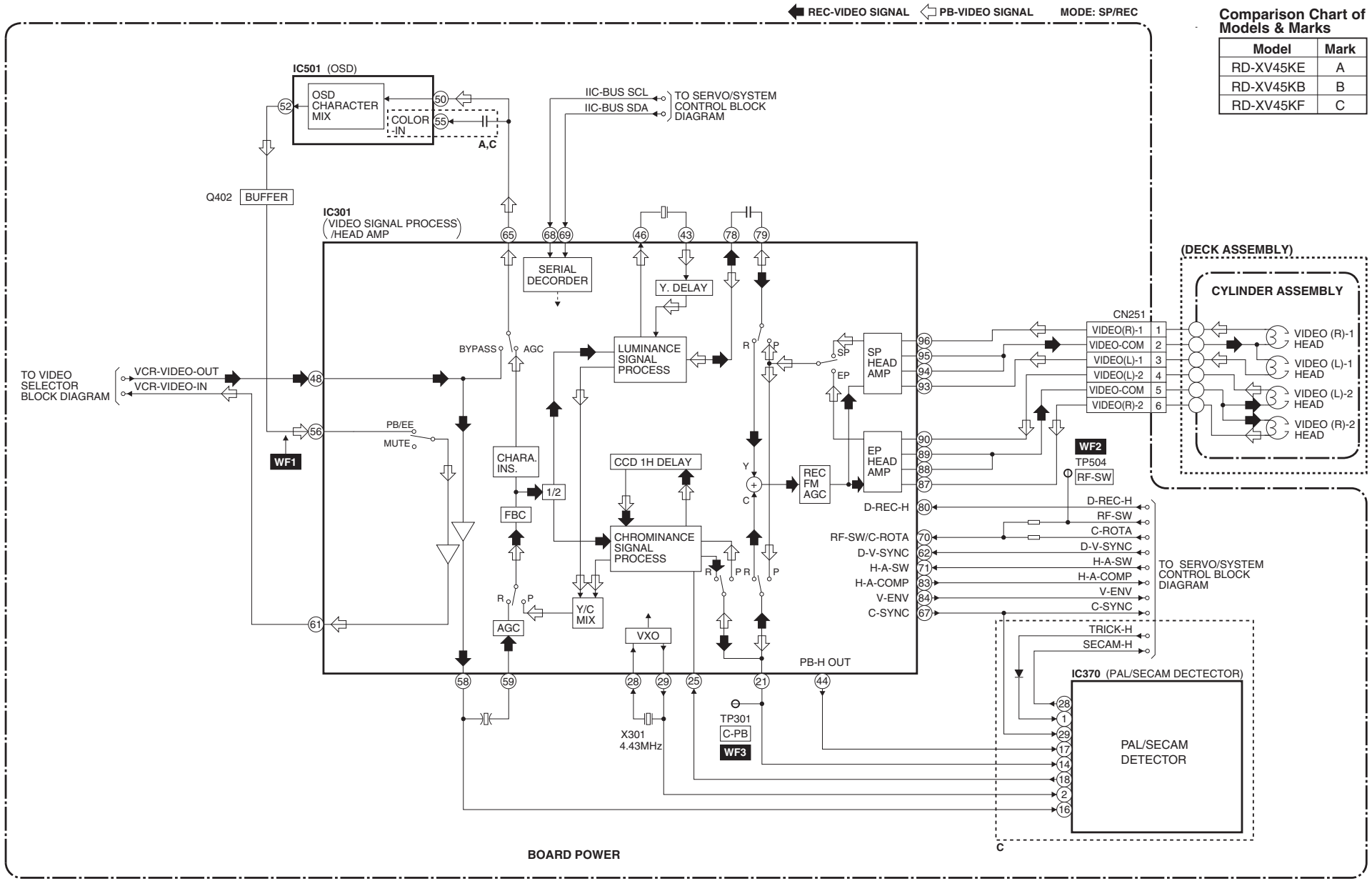
# Video Selector Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



# Video Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

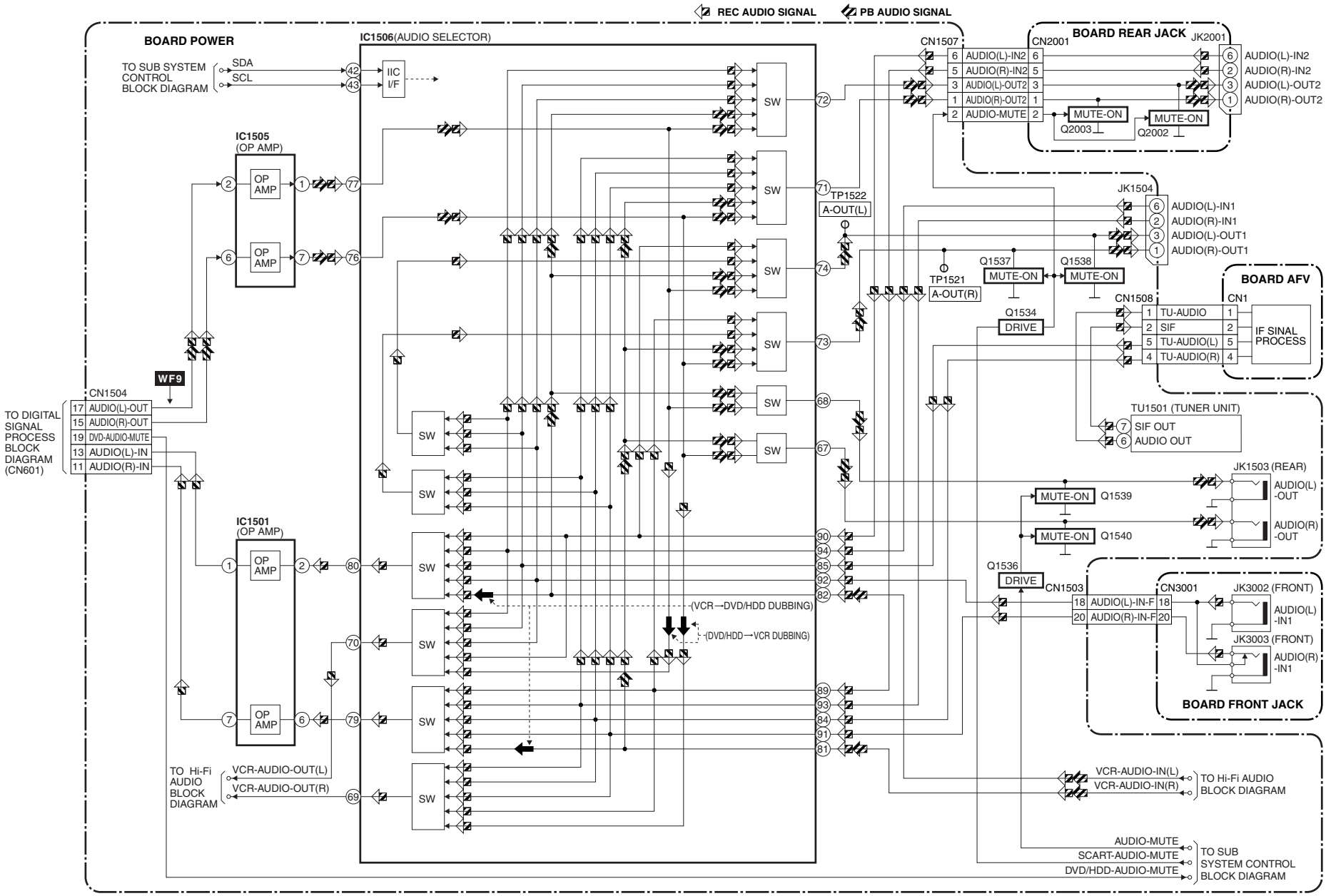



**Comparison Chart of Models & Marks**

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

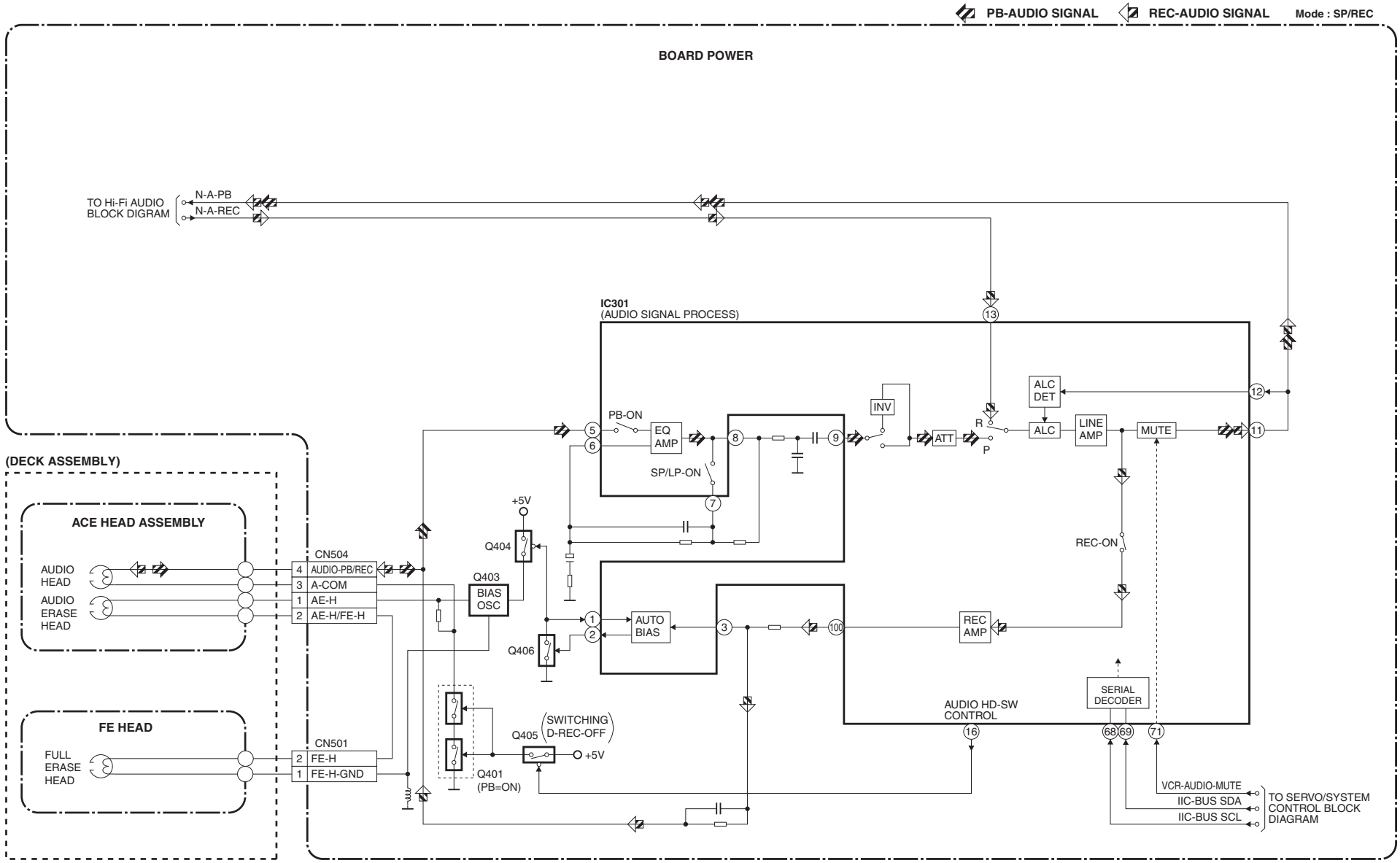
# Audio Selector Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



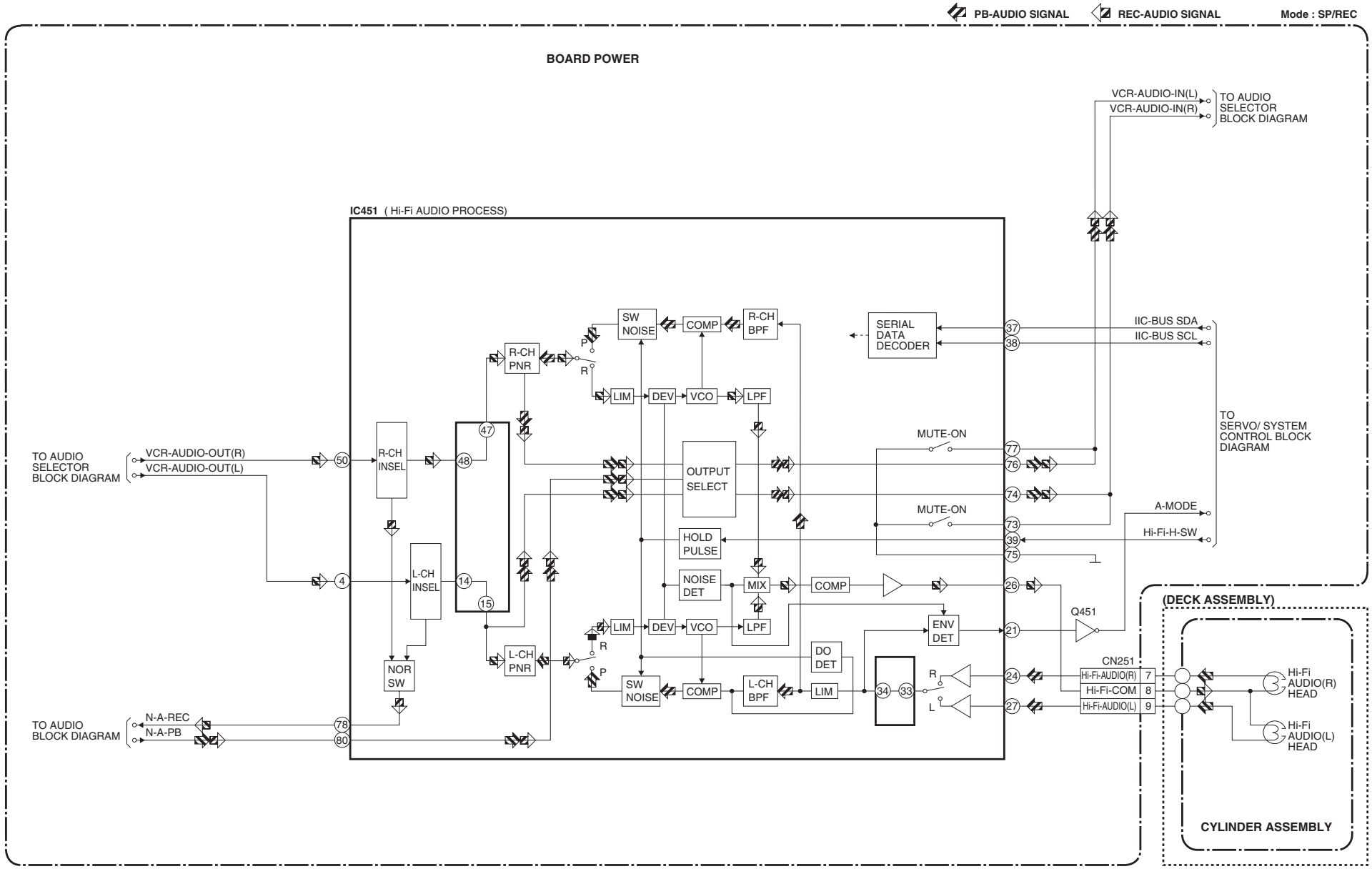
# Audio Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



# Hi-Fi Audio Selector Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



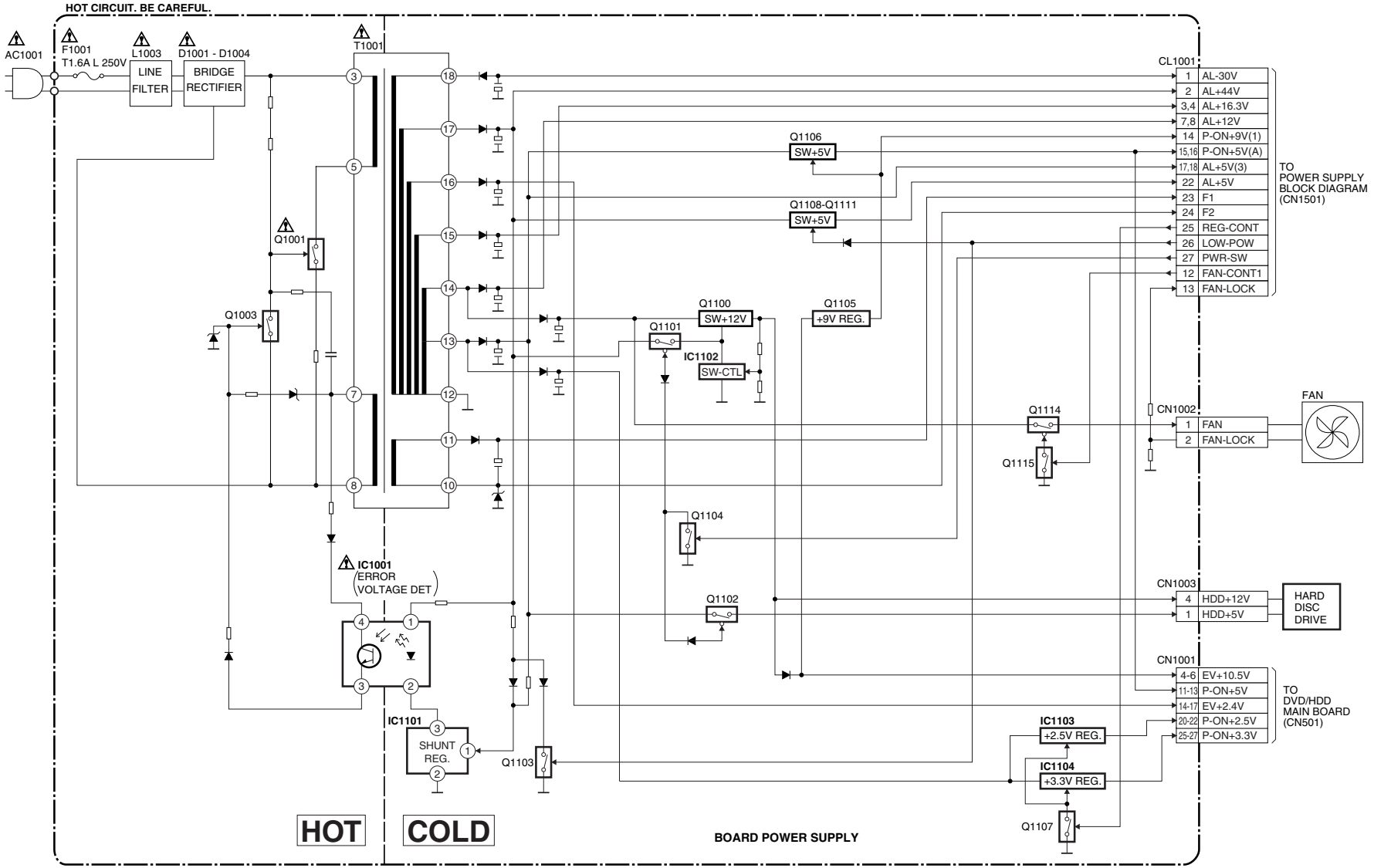
# Power Supply Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.

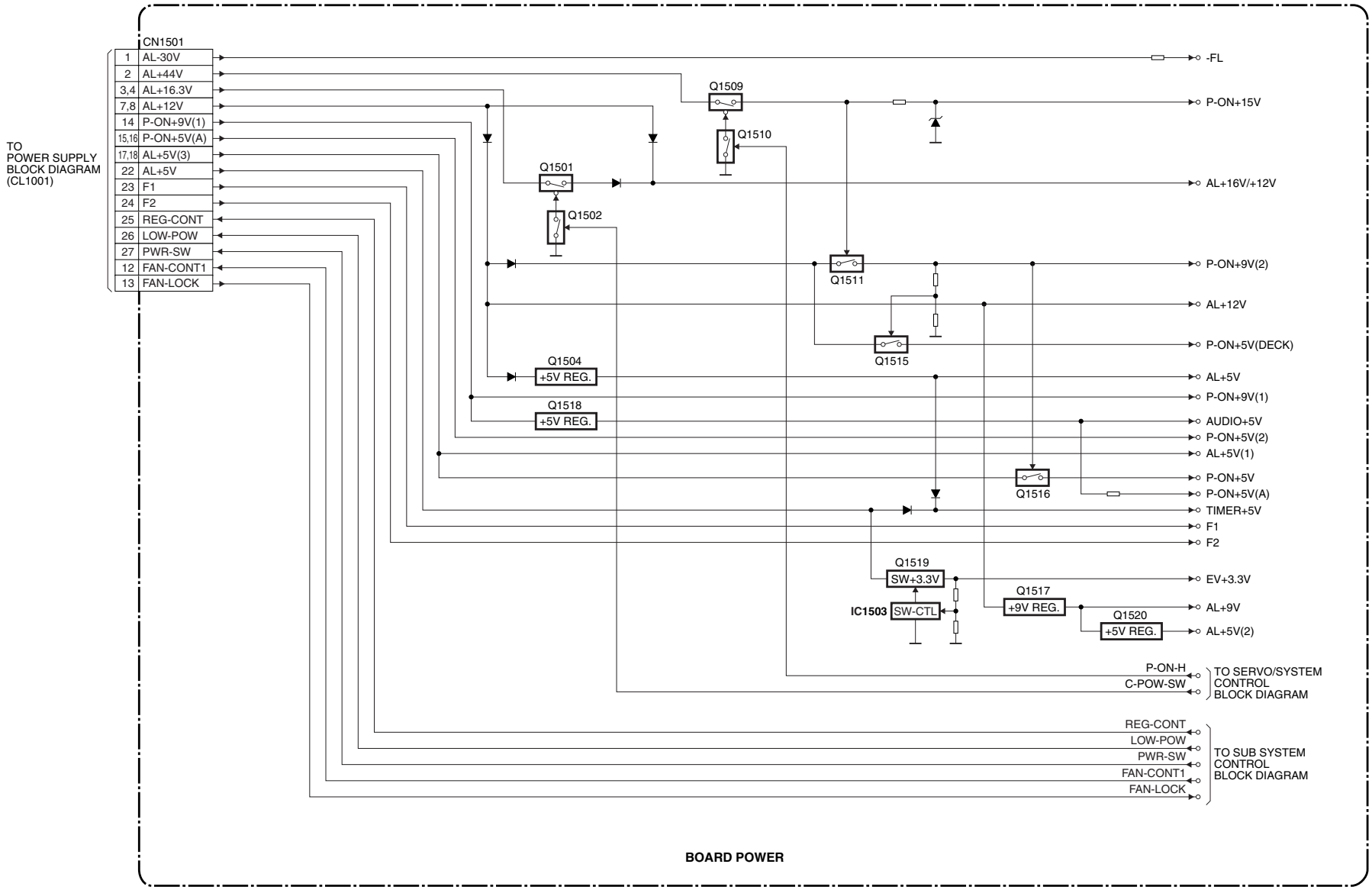
**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

**CAUTION !**
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.



# Sub Power Supply Block Diagram

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



# SCHEMATIC DIAGRAMS / BOARD'S AND TEST POINTS

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

## Standard Notes

## WARNING

Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are identified by the mark " ⚠ " in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire, or other hazards.

## Notes:

1. Do not use the part number shown on these drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since these drawings were prepared.
2. All resistance values are indicated in ohms ($K=10^3$, $M=10^6$).
3. Resistor wattages are 1/4W or 1/6W unless otherwise specified.
4. All capacitance values are indicated in μF ($P=10^{-6}$ μF).
5. All voltages are DC voltages unless otherwise specified.
6. Electrical parts such as capacitors, connectors, diodes, IC's, transistors, resistors, switches, and fuses are identified by four digits. The first two digits are not shown for each component. In each block of the diagram, there is a note such as shown below to indicate these abbreviated two digits.

## LIST OF CAUTION, NOTES, AND SYMBOLS USED IN THE SCHEMATIC DIAGRAMS ON THE FOLLOWING PAGES:

### 1. CAUTION:

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE.

### 2. CAUTION:

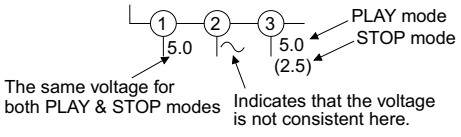
Fixed Voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown, first check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

### 3. Note:

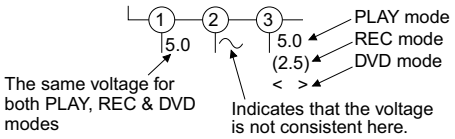
1. Do not use the part number shown on the drawings for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since the drawings were prepared.
2. To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

### 4. Voltage indications for PLAY and REC modes on the schematics are as shown below:

< DVD/DVR Section >




< VCR Section >

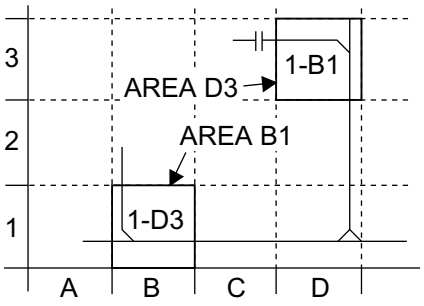



Unit: Volts

### 5. How to read converged lines

1-D3
- Distinction Area
- Line Number (1 to 3 digits)

Examples:
1. "1-D3" means that line number "1" goes to the line number "1" of the area "D3".
2. "1-B1" means that line number "1" goes to the line number "1" of the area "B1".




### 6. Test Point Information

: Indicates a test point with a jumper wire across a hole in the BOARD.

: Used to indicate a test point with a component lead on foil side.

: Used to indicate a test point with no test pin.

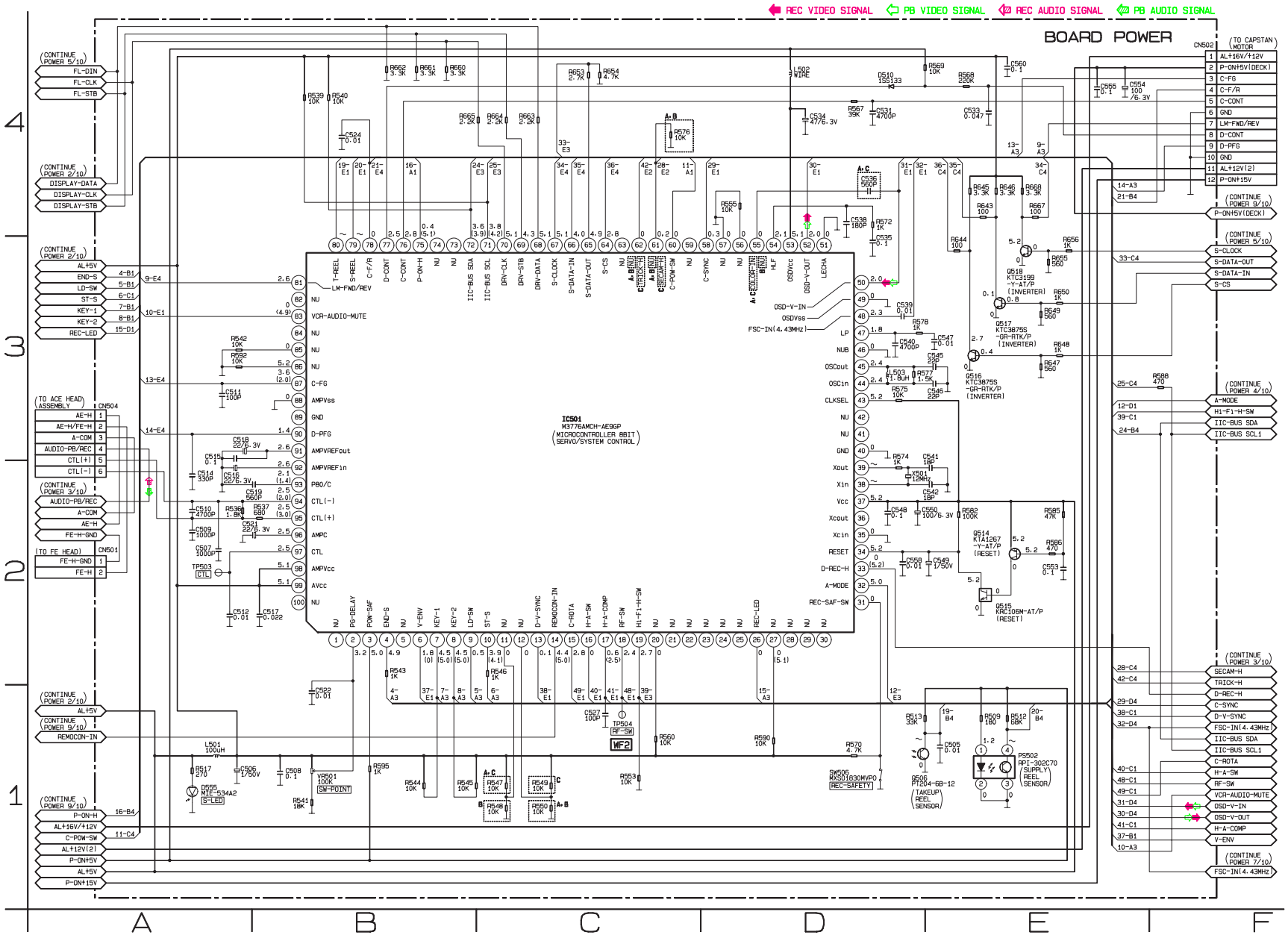
: Used to indicate a test point with a test pin.

# POWER 1/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

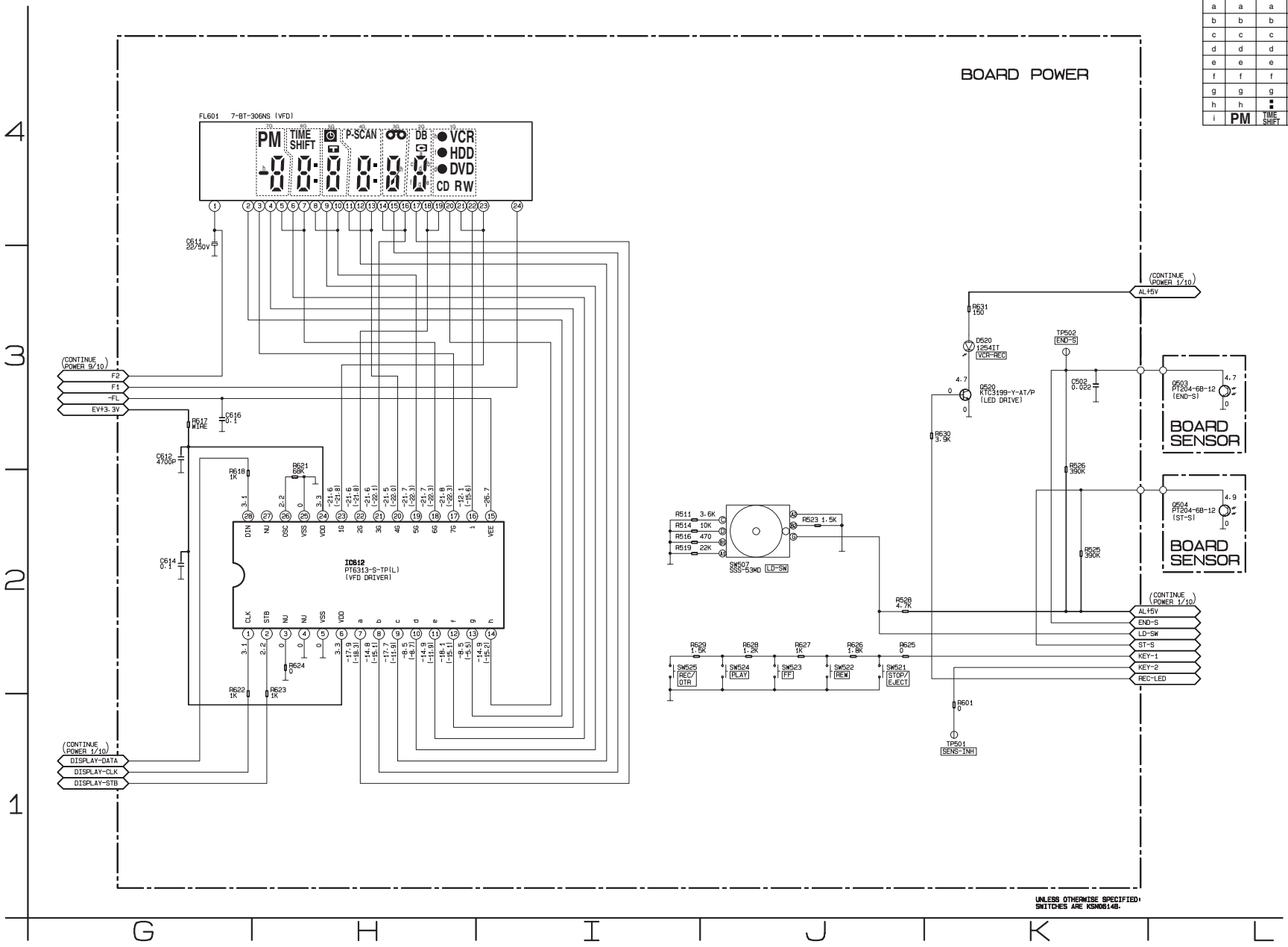


## POWER 2/10 & SENSOR Schematic Diagram < VCR Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

FL601 MATRIX CHART

| | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|---|---|---|---|---|---|---|---|
| a | a | a | a | a | a | a | CD |
| b | b | b | b | b | b | b | W |
| c | c | c | c | c | c | c | R |
| d | d | d | d | d | d | d | d |
| e | e | e | e | e | e | e | DVD |
| f | f | f | f | f | f | f | f |
| g | g | g | g | g | g | g | HDD |
| h | h | : | T | : | h | C | h |
| i | PM | TIME SHIFT | C | P-SCAN | oo | DB | VCR |

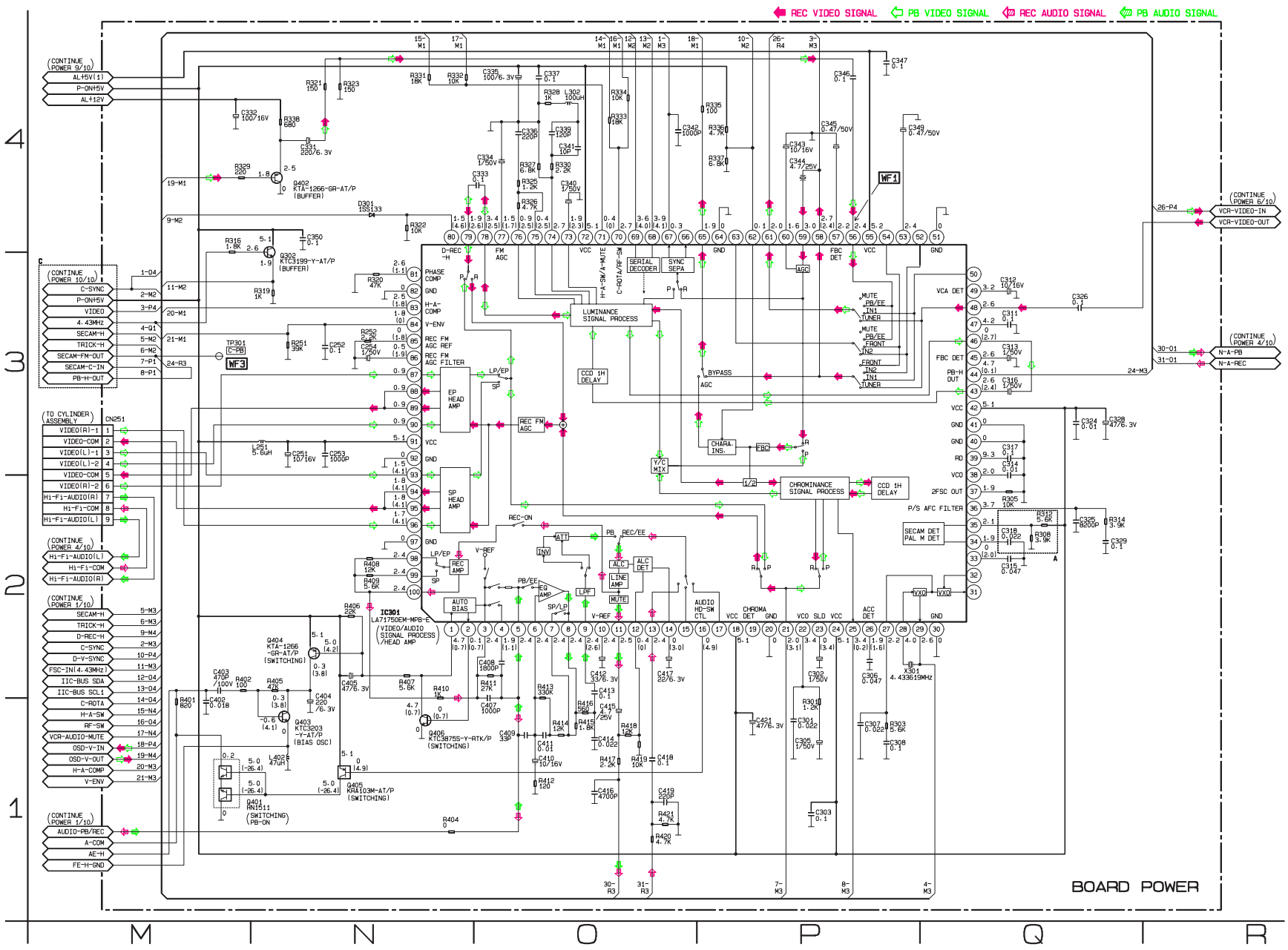


# POWER 3/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |





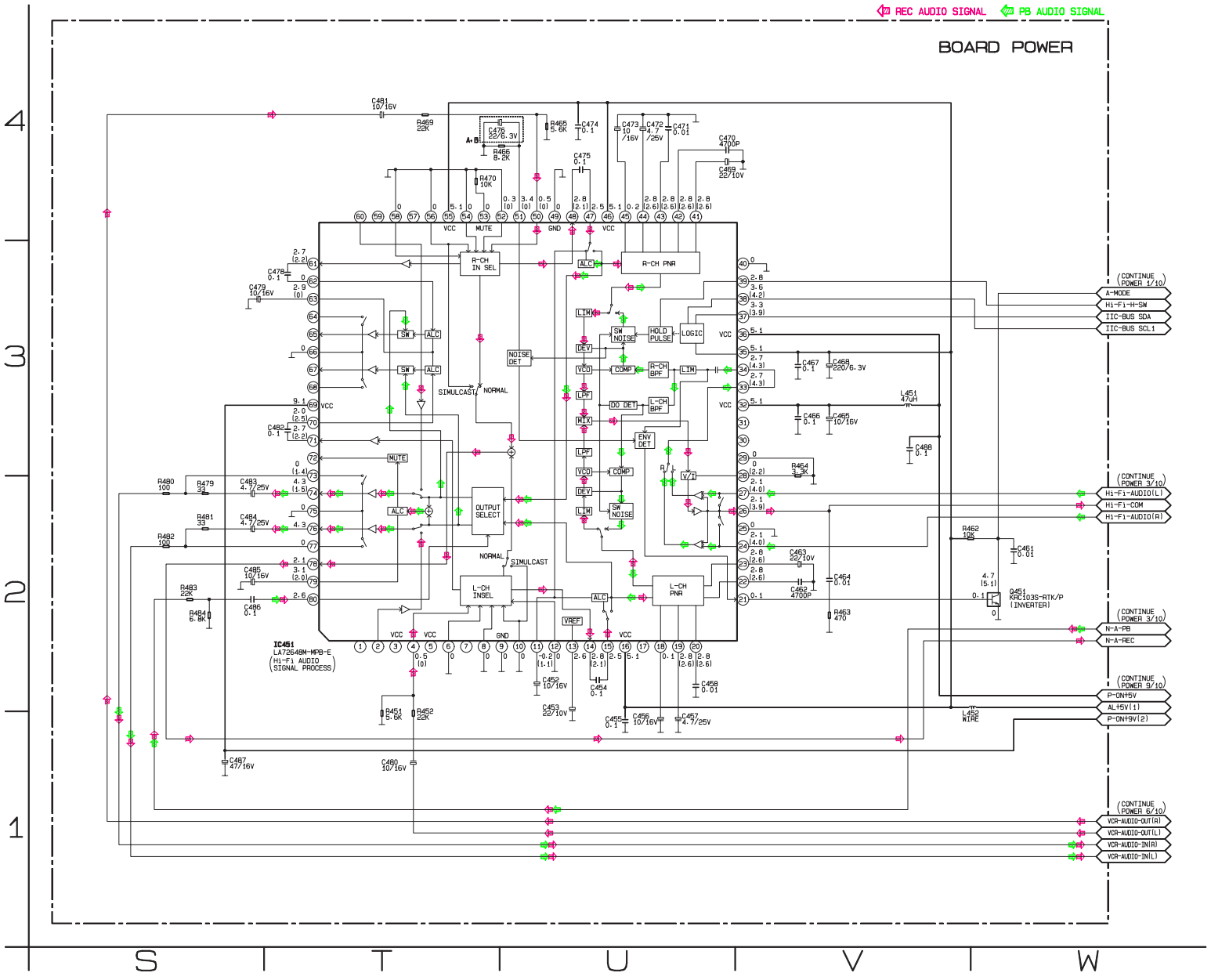

E439ASCP3

## POWER 4/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |



# POWER 5/10 & POWER SWITCH Schematic Diagram < VCR Section >

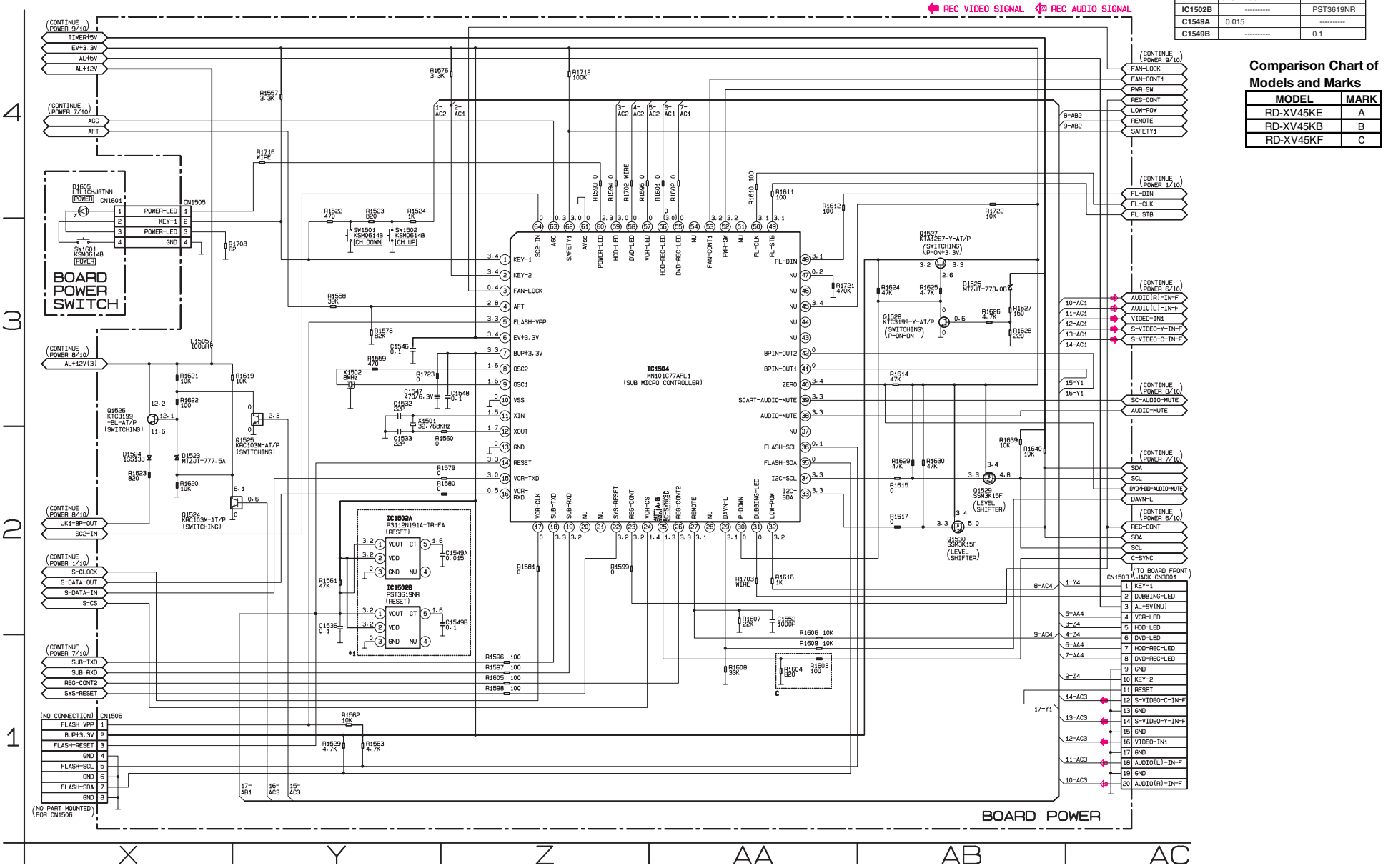
NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

*1 NOTE
These components (IC1502A, C1549A, IC1502B, C1549B) can be used in any models.
However, you cannot mix components under Group A with the ones under Group B.
You can choose either Group. The difference between Group A and Group B is shown below.

| | Group A | Group B |
|---|---|---|
| IC1502A | R3112N191A-TR-FA /BU4219G-TR | ---------- |
| IC1502B | ---------- | PST3619NR |
| C1549A | 0.015 | ---------- |
| C1549B | ---------- | 0.1 |

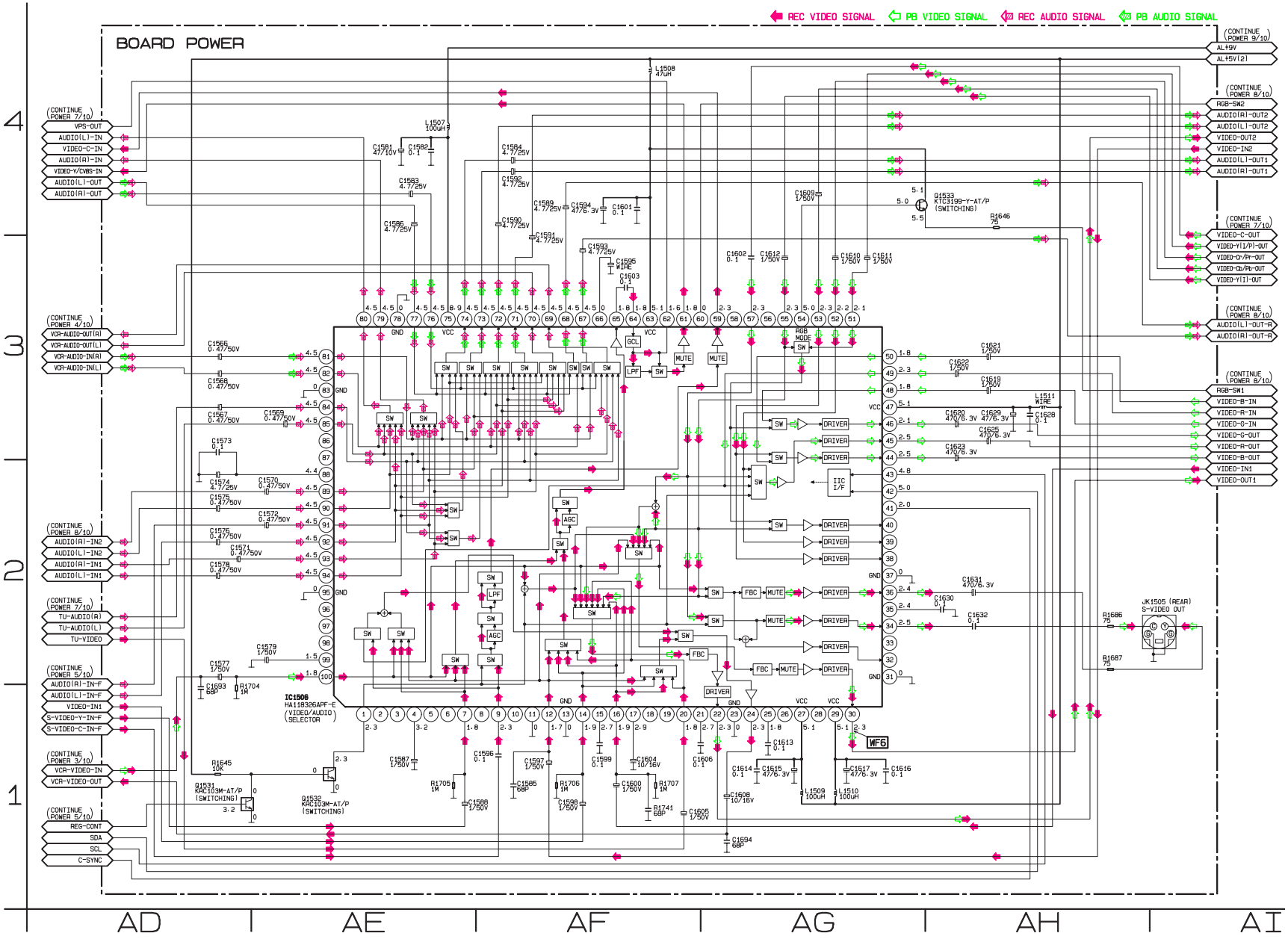
**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |



## POWER 6/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

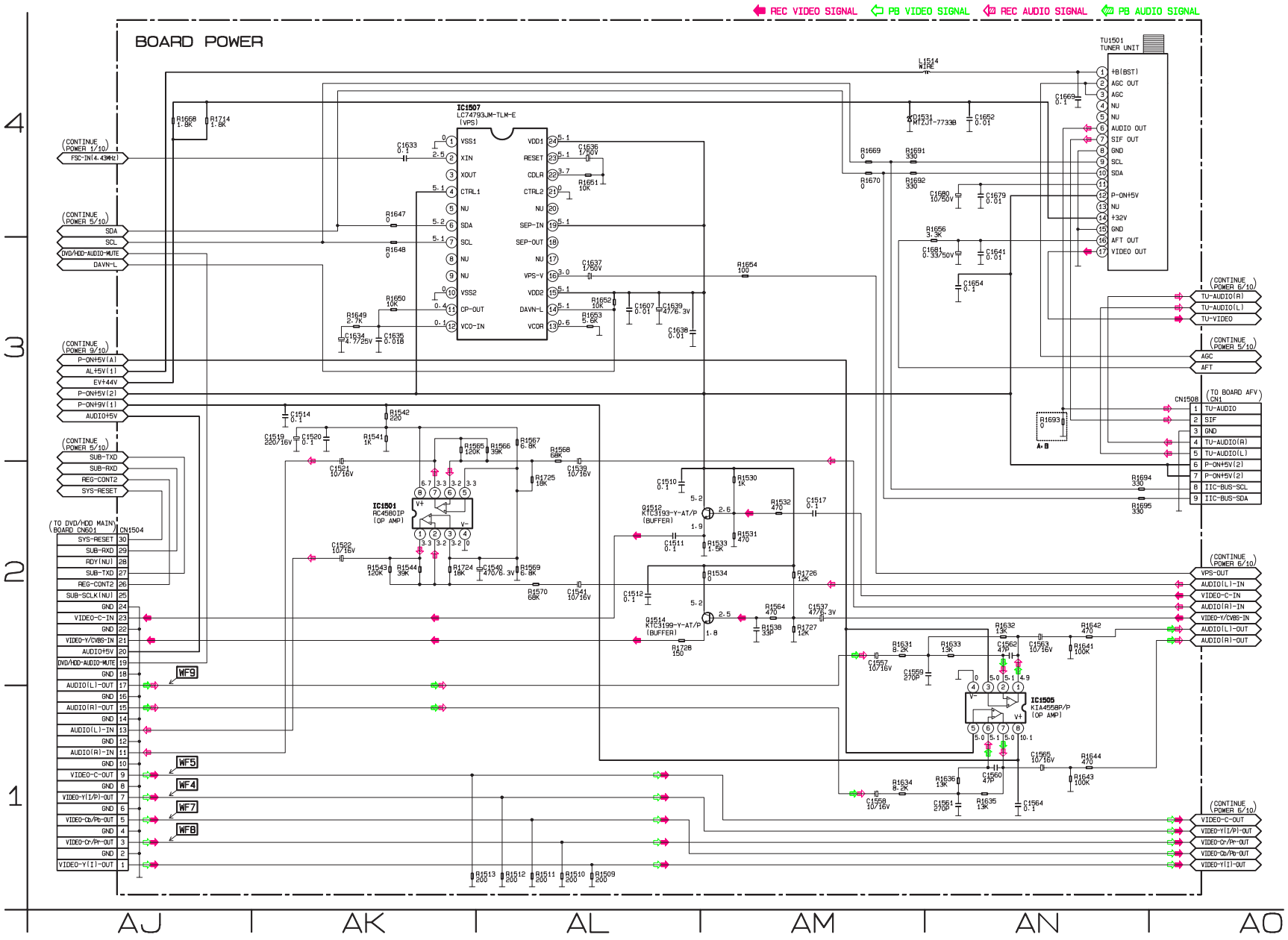


# POWER 7/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

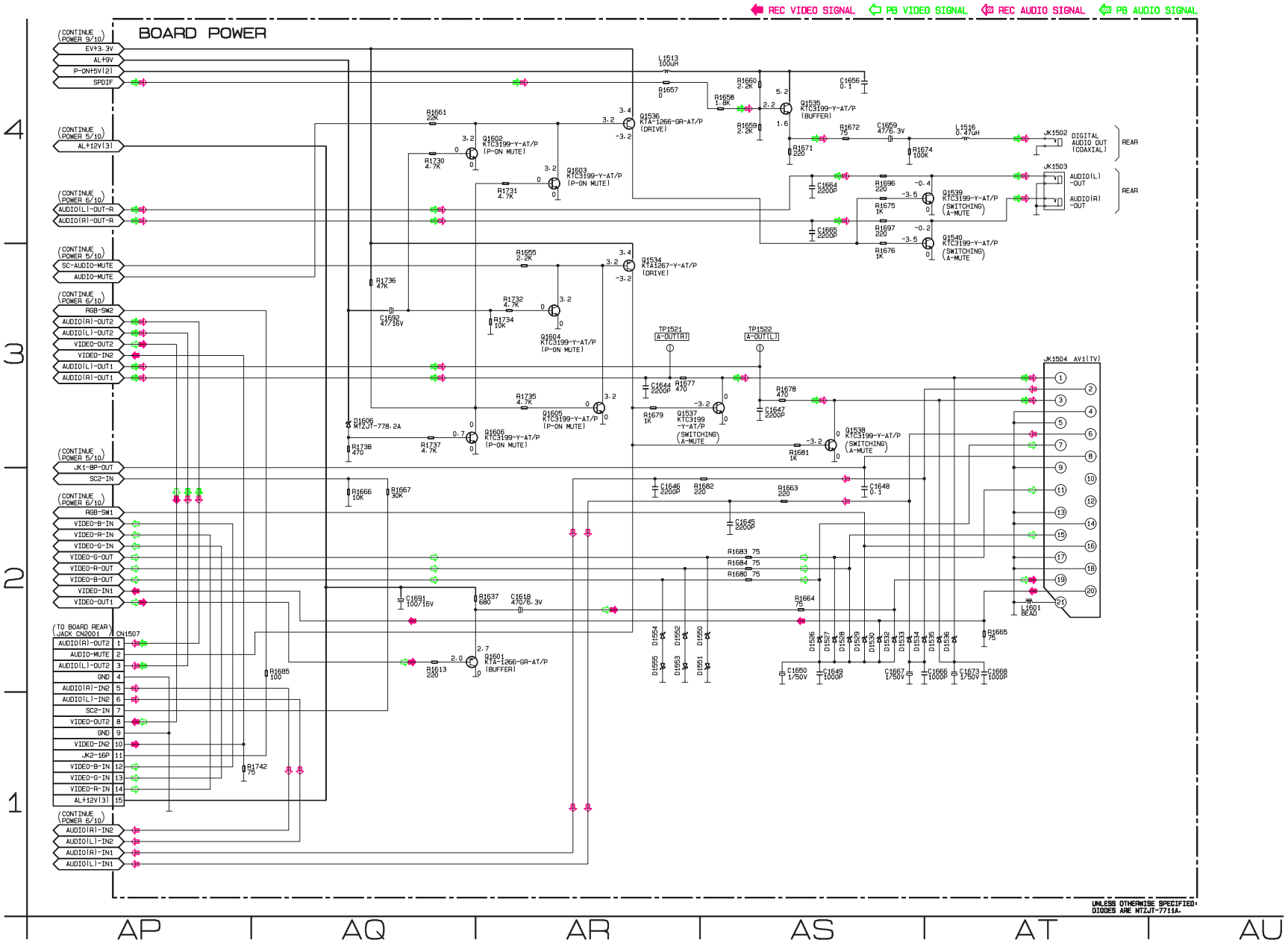
**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |



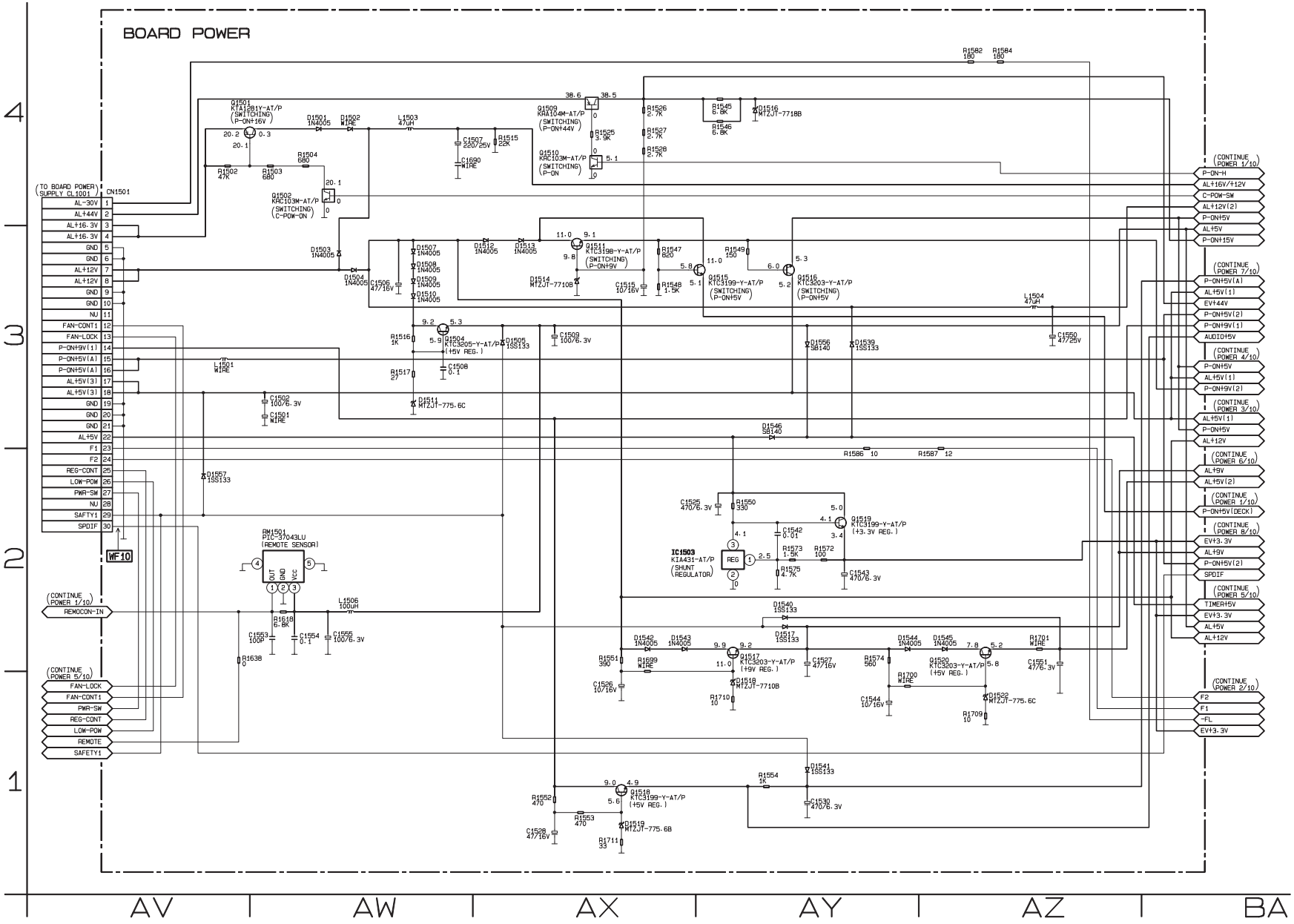
## POWER 8/10 Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

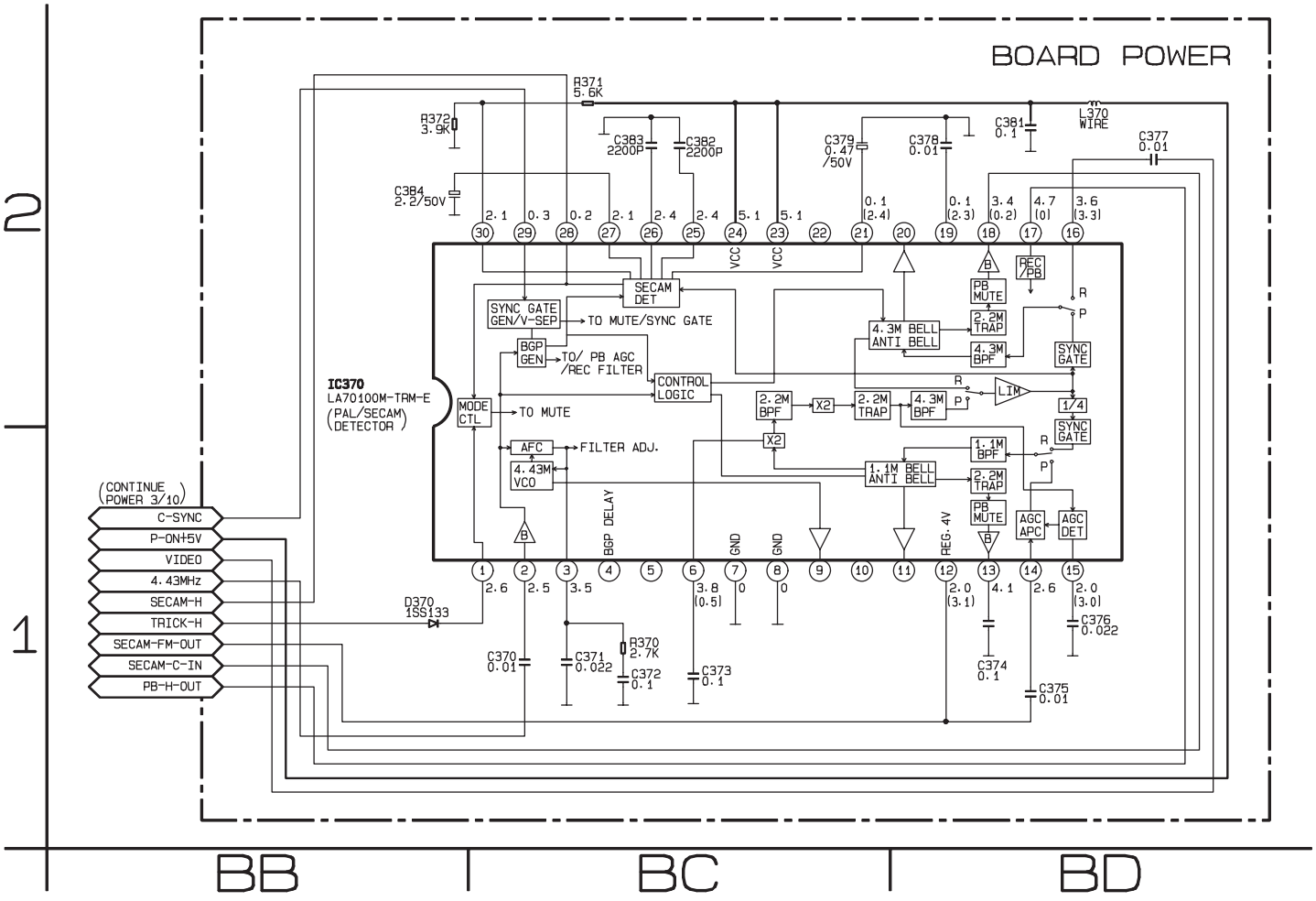


## POWER 9/10 Schematic Diagram < VCR Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.



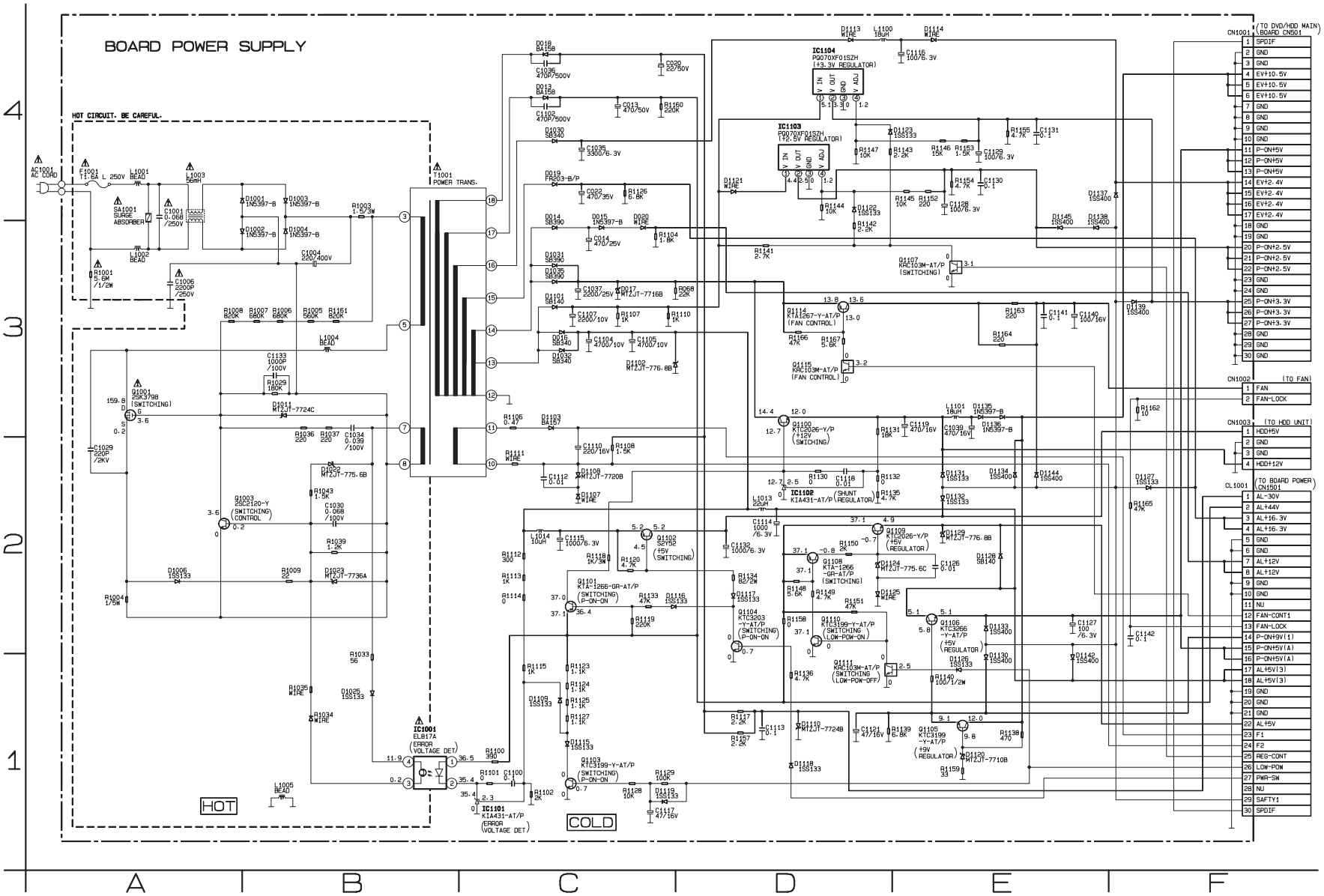
# POWER SUPPLY Schematic Diagram < VCR Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**CAUTION !**
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit.
If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply.
Otherwise it may cause some components in the power supply circuit to fail.

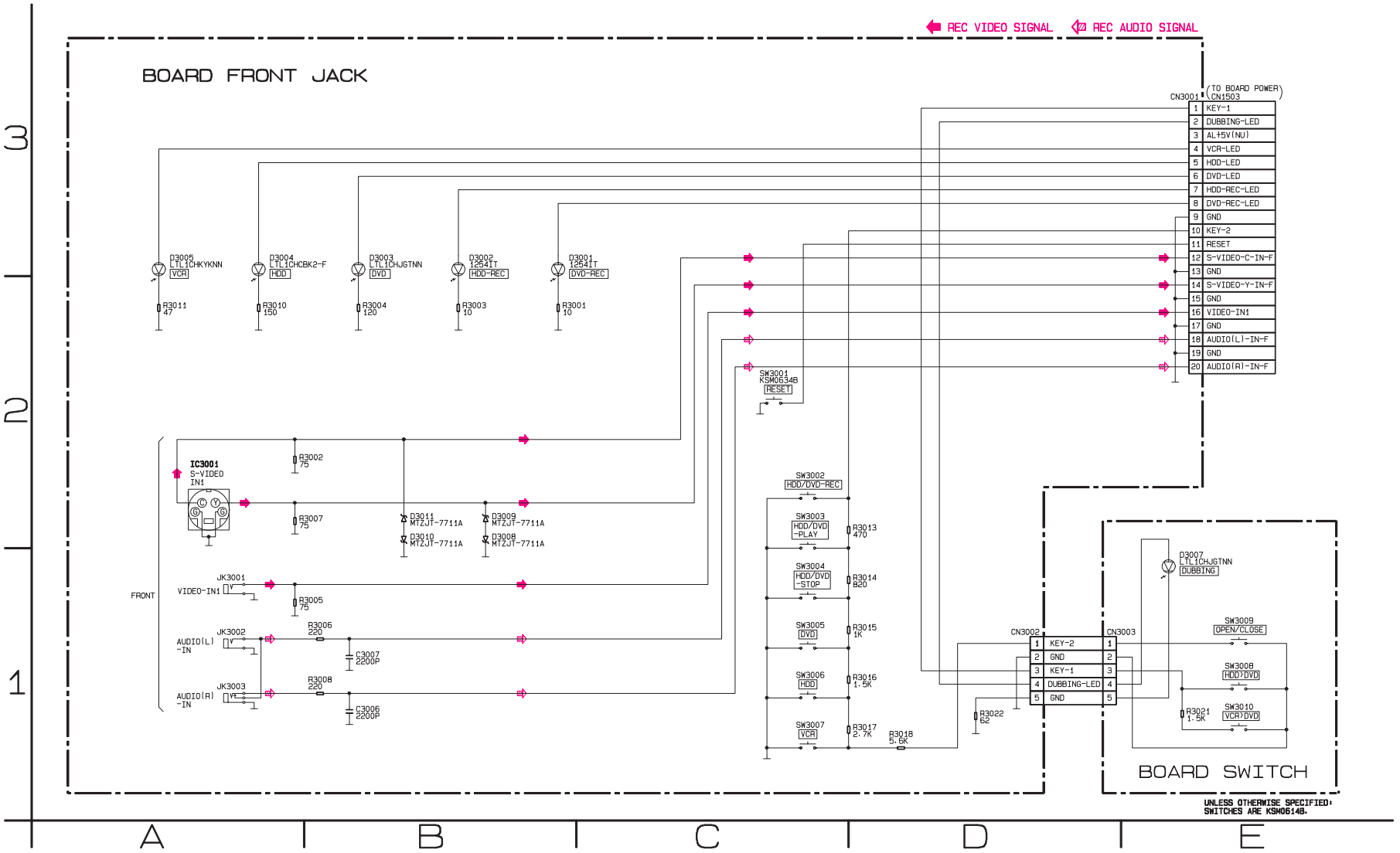
**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.



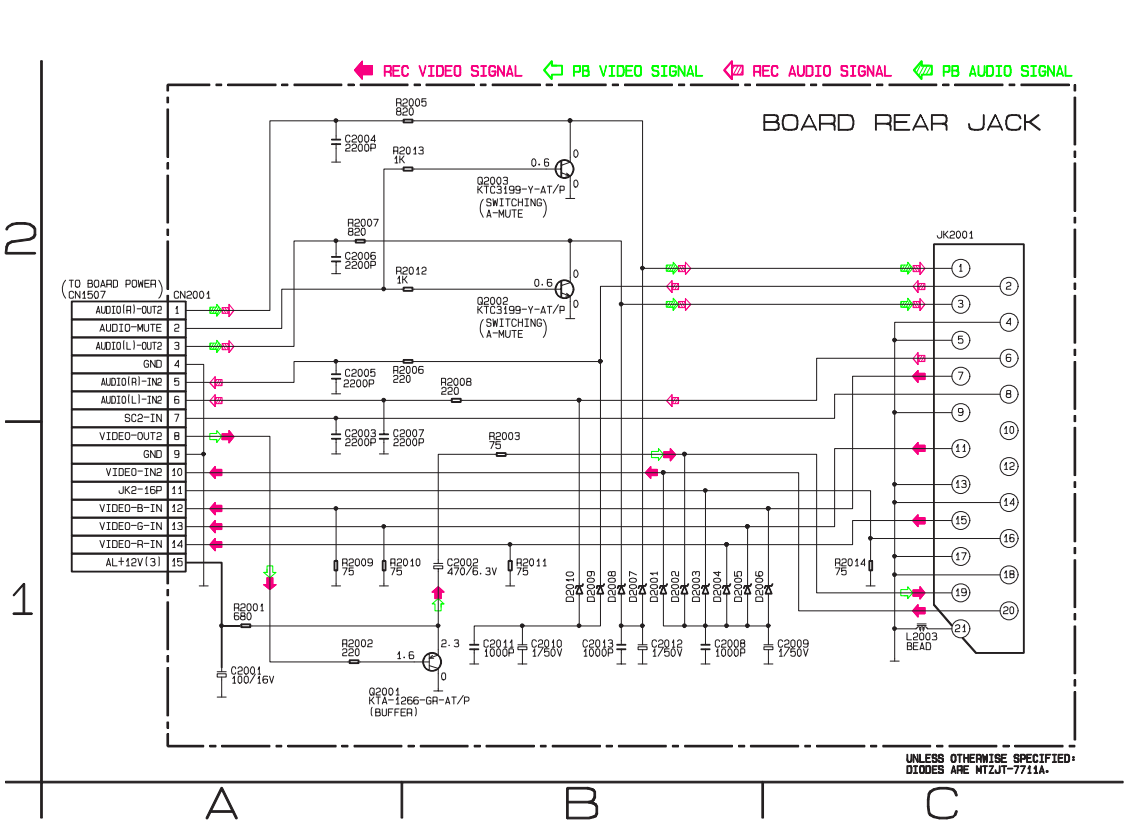
## FRONT JACK & SWITCH Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.



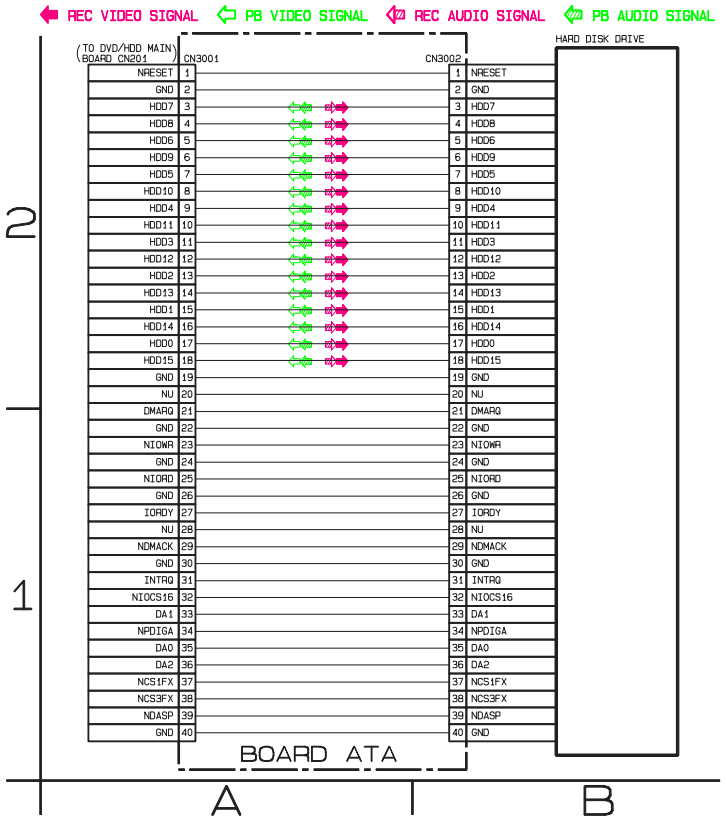
## REAR JACK Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.




E439ASCRJ

## ATA Schematic Diagram < DVD/HDD Section >



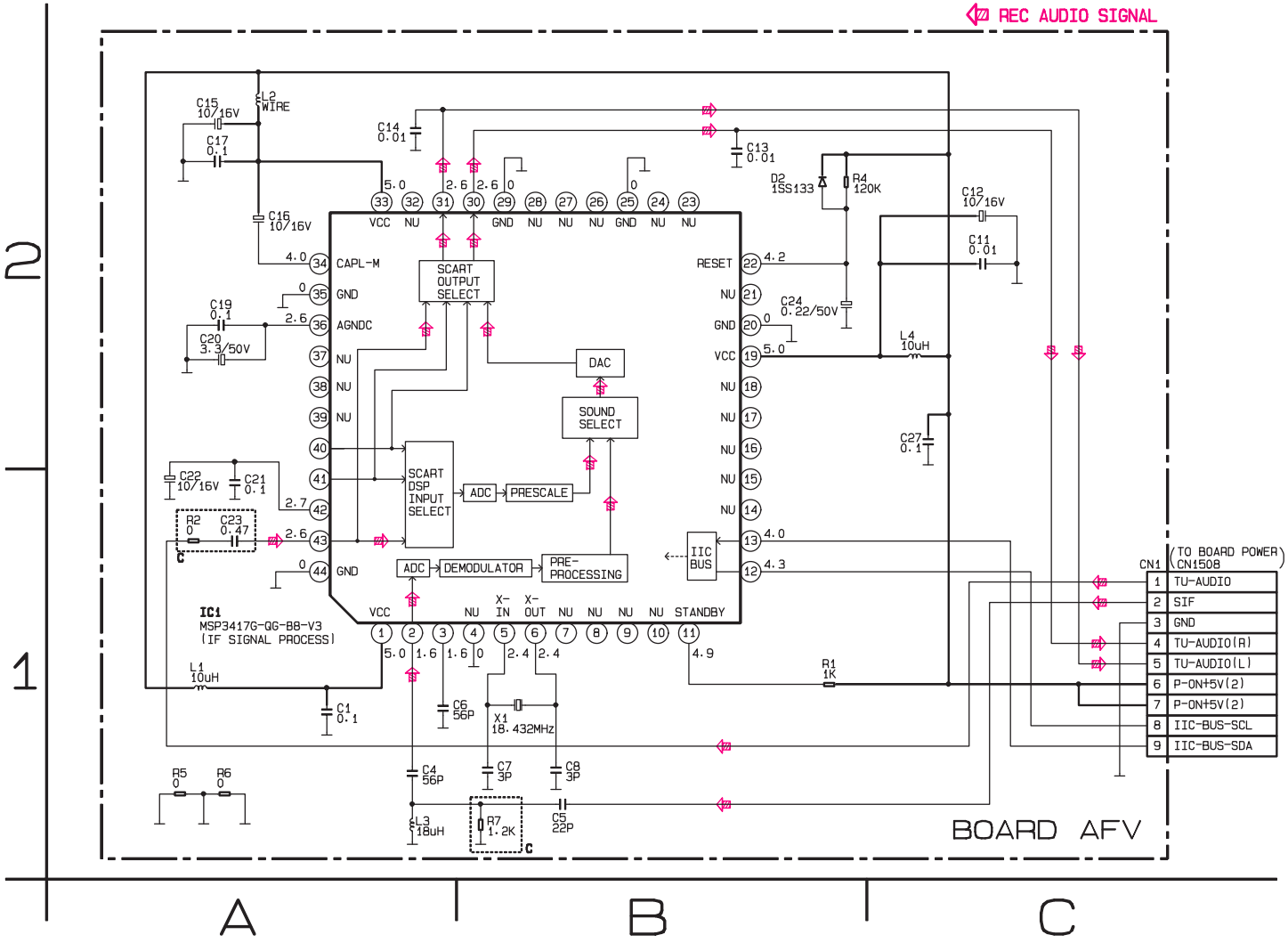

E439ASCAT

## AFV Schematic Diagram < VCR Section >

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

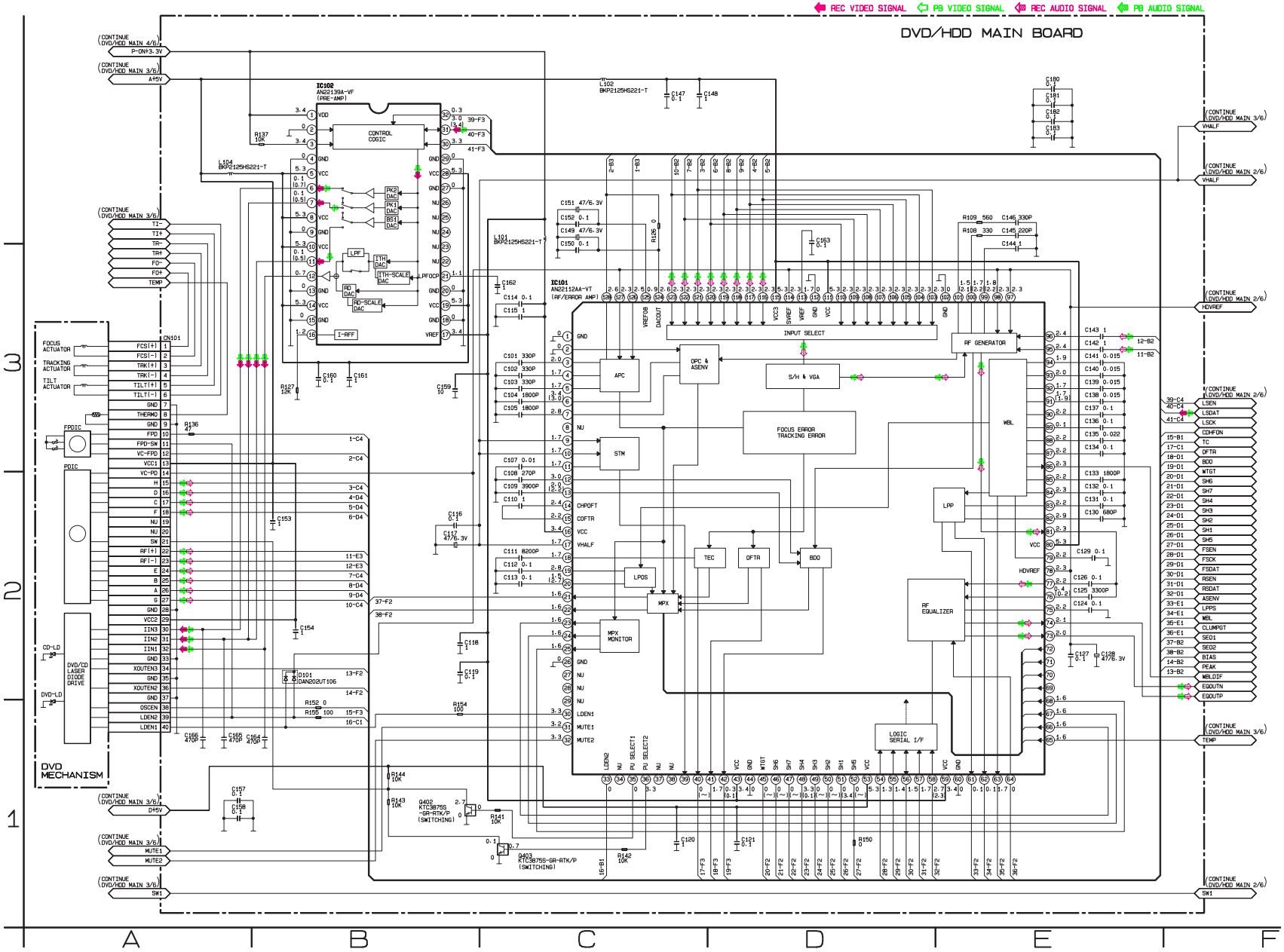
**Comparison Chart of Models and Marks**

| MODEL | MARK |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |



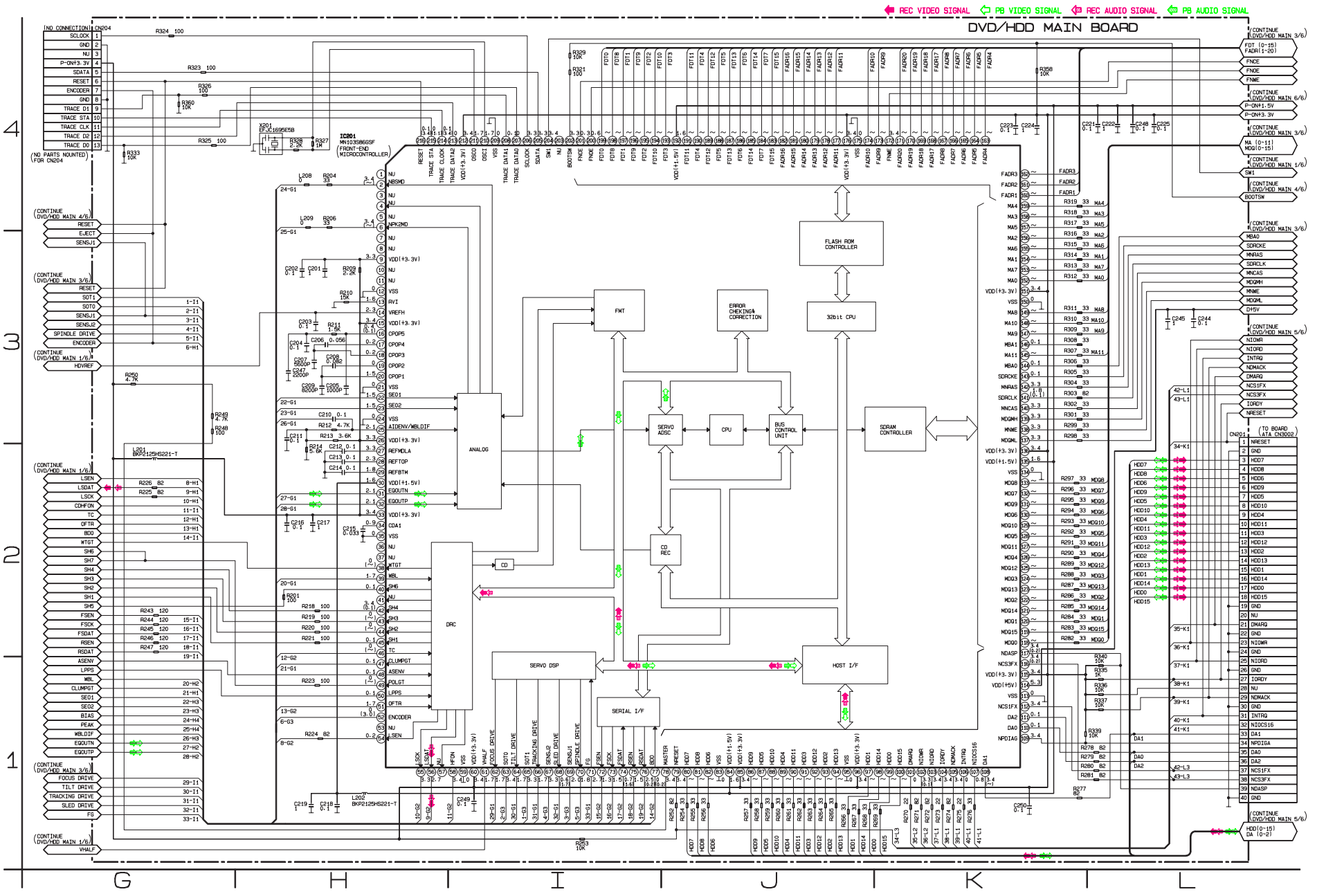
# DVD/HDD MAIN 1/6 Schematic Diagram < DVD/HDD Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



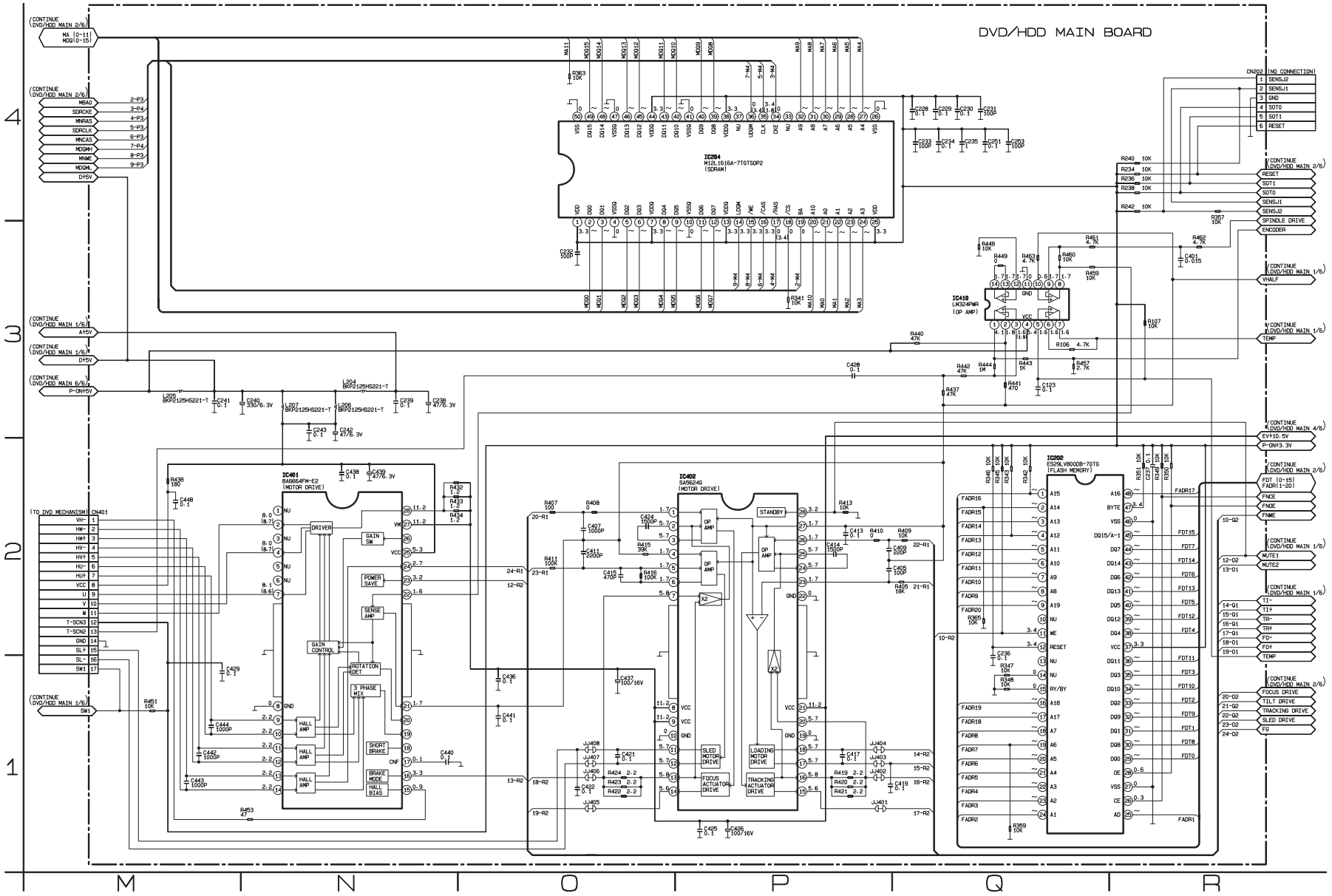
# DVD/HDD MAIN 2/6 Schematic Diagram < DVD/HDD Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



## DVD/HDD MAIN 3/6 Schematic Diagram < DVD/HDD Section >

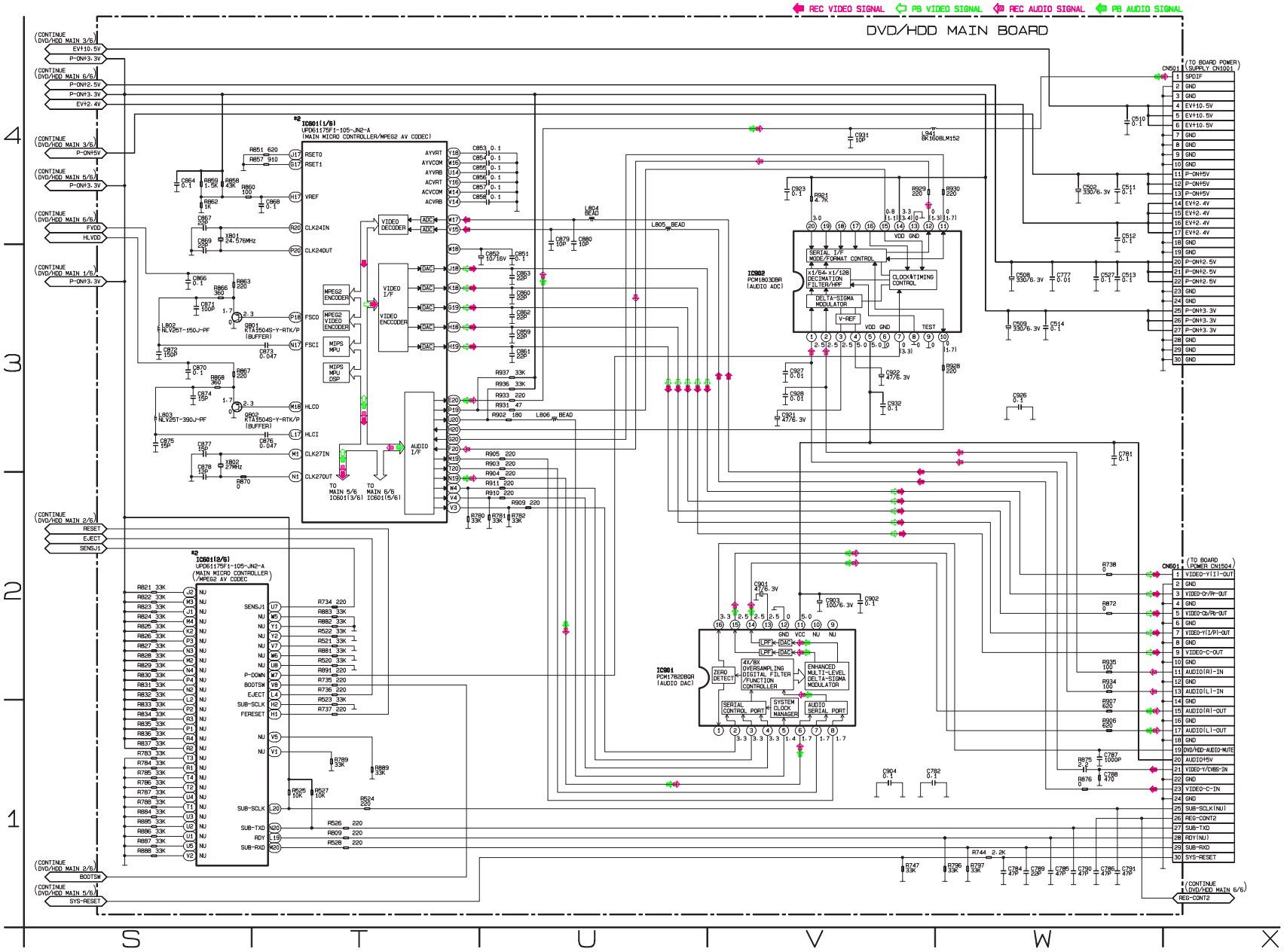
**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



# DVD/HDD MAIN 4/6 Schematic Diagram < DVD/HDD Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**＊2 NOTE:**
The order of pins shown in this diagram is different from that of actual IC601.
IC601 is divided into six and shown as IC601 (1/6) ~ IC601 (6/6) in this DVD/HDD Main Schematic Diagram Section.



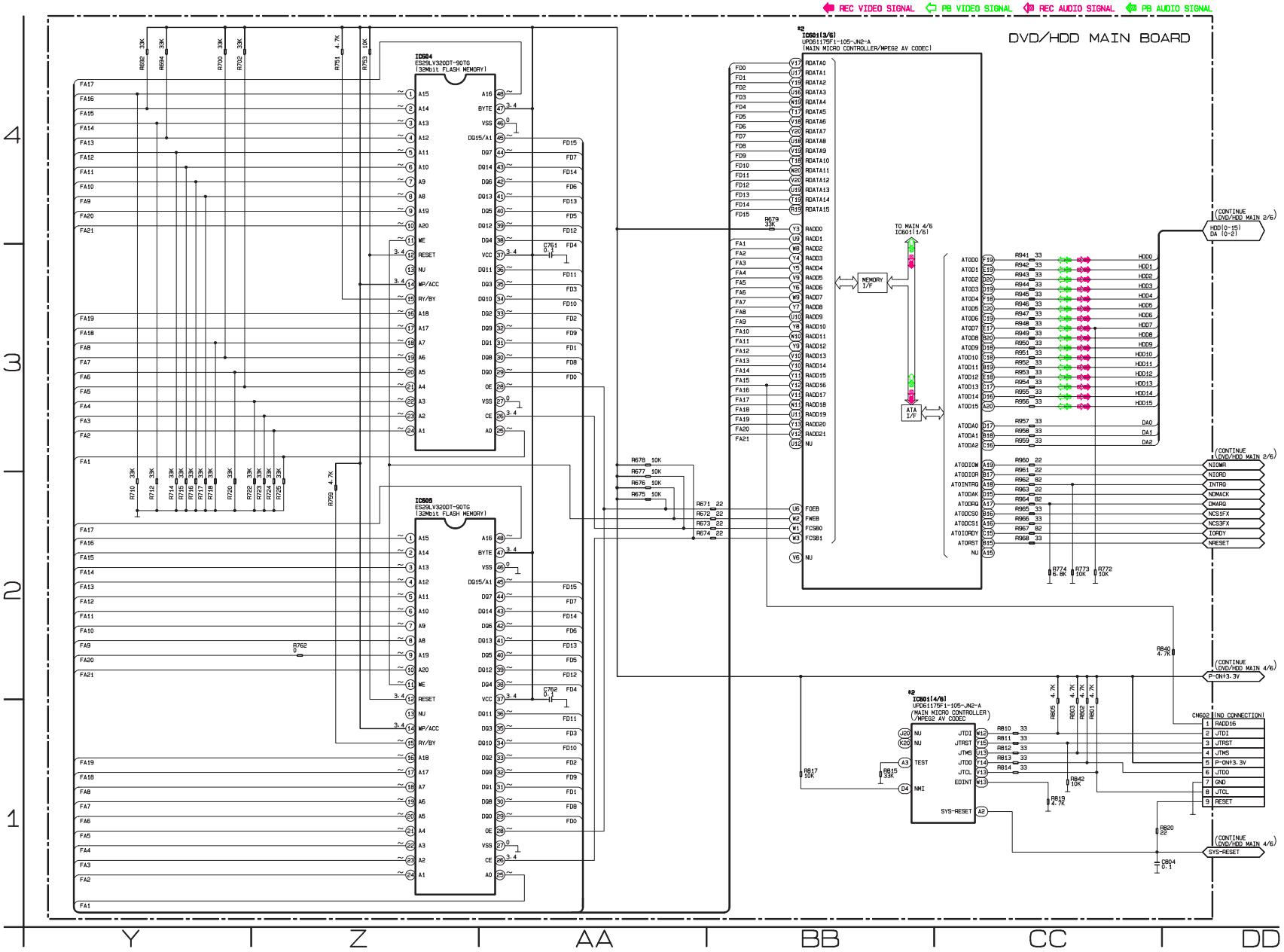



E439ASCD4

# DVD/HDD MAIN 5/6 Schematic Diagram < DVD/HDD Section >

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

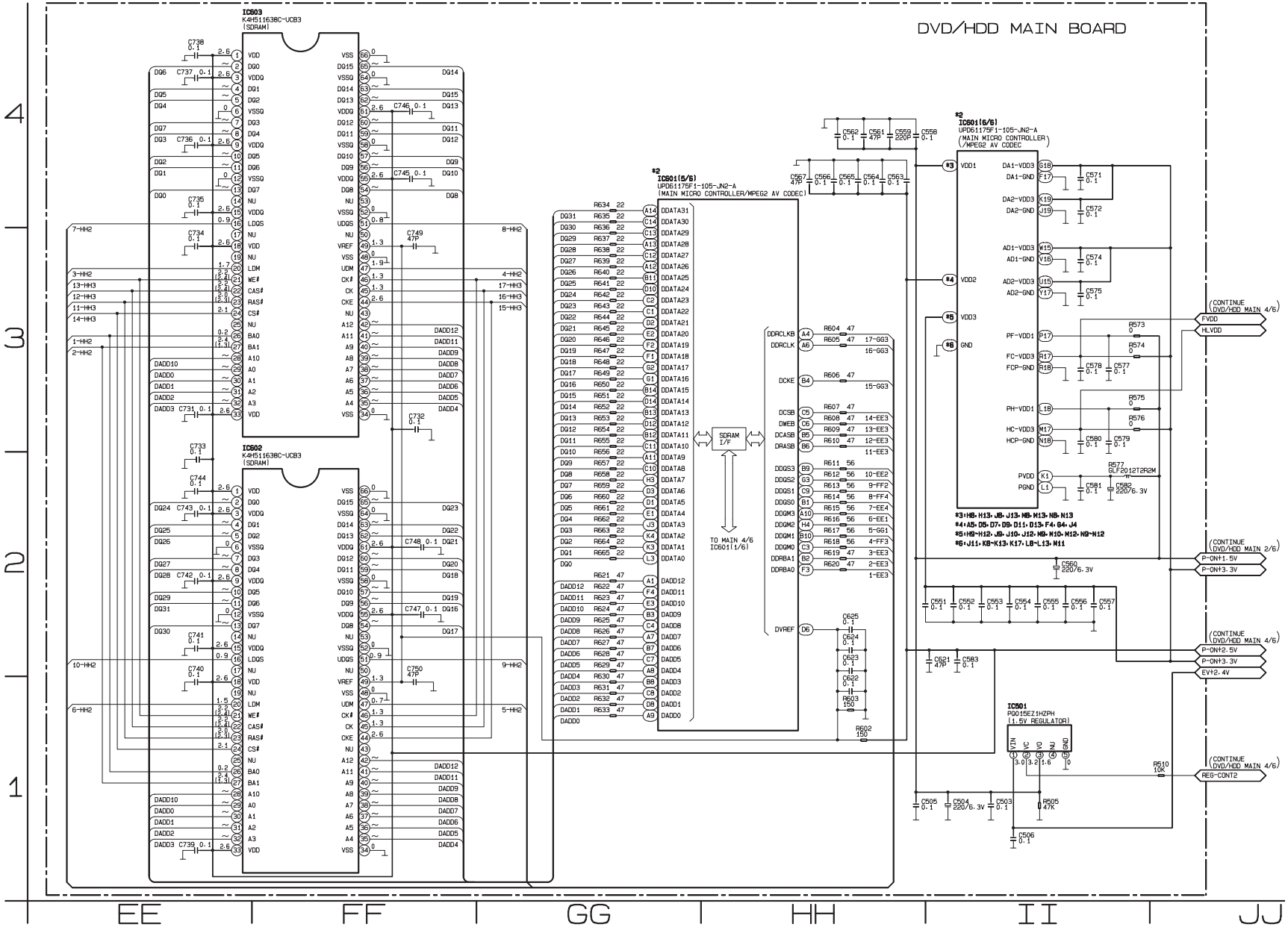
**＊2 NOTE:**
The order of pins shown in this diagram is different from that of actual IC601.
IC601 is divided into six and shown as IC601 (1/6) ~ IC601 (6/6) in this DVD/HDD Main Schematic Diagram Section.



# DVD/HDD MAIN 6/6 Schematic Diagram < DVD/HDD Section >

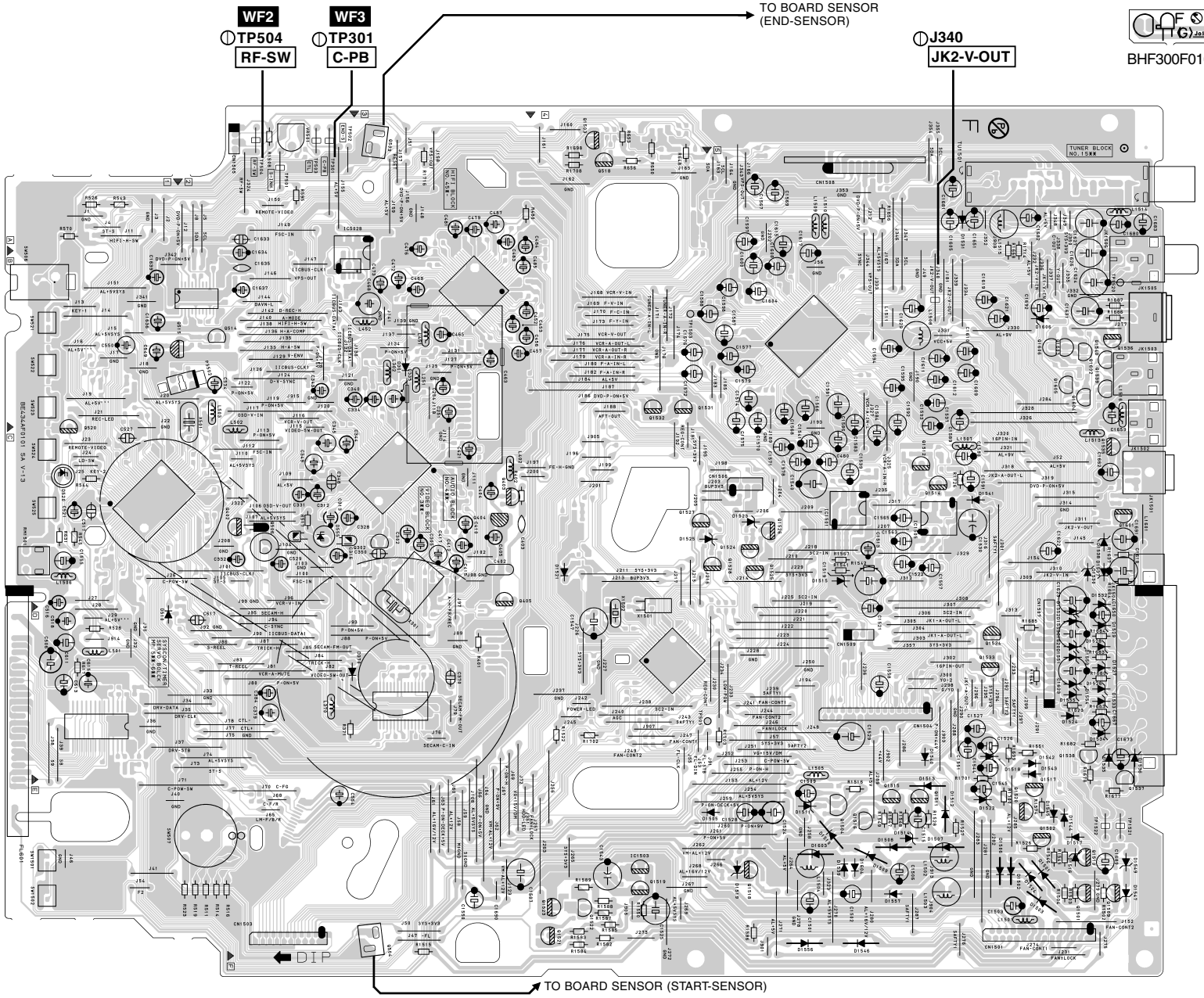
**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**＊2 NOTE:**
The order of pins shown in this diagram is different from that of actual IC601.
IC601 is divided into six and shown as IC601 (1/6) ~ IC601 (6/6) in this DVD/HDD Main Schematic Diagram Section.

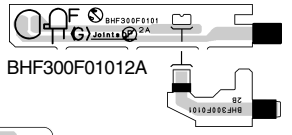


## BOARD POWER Top View

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

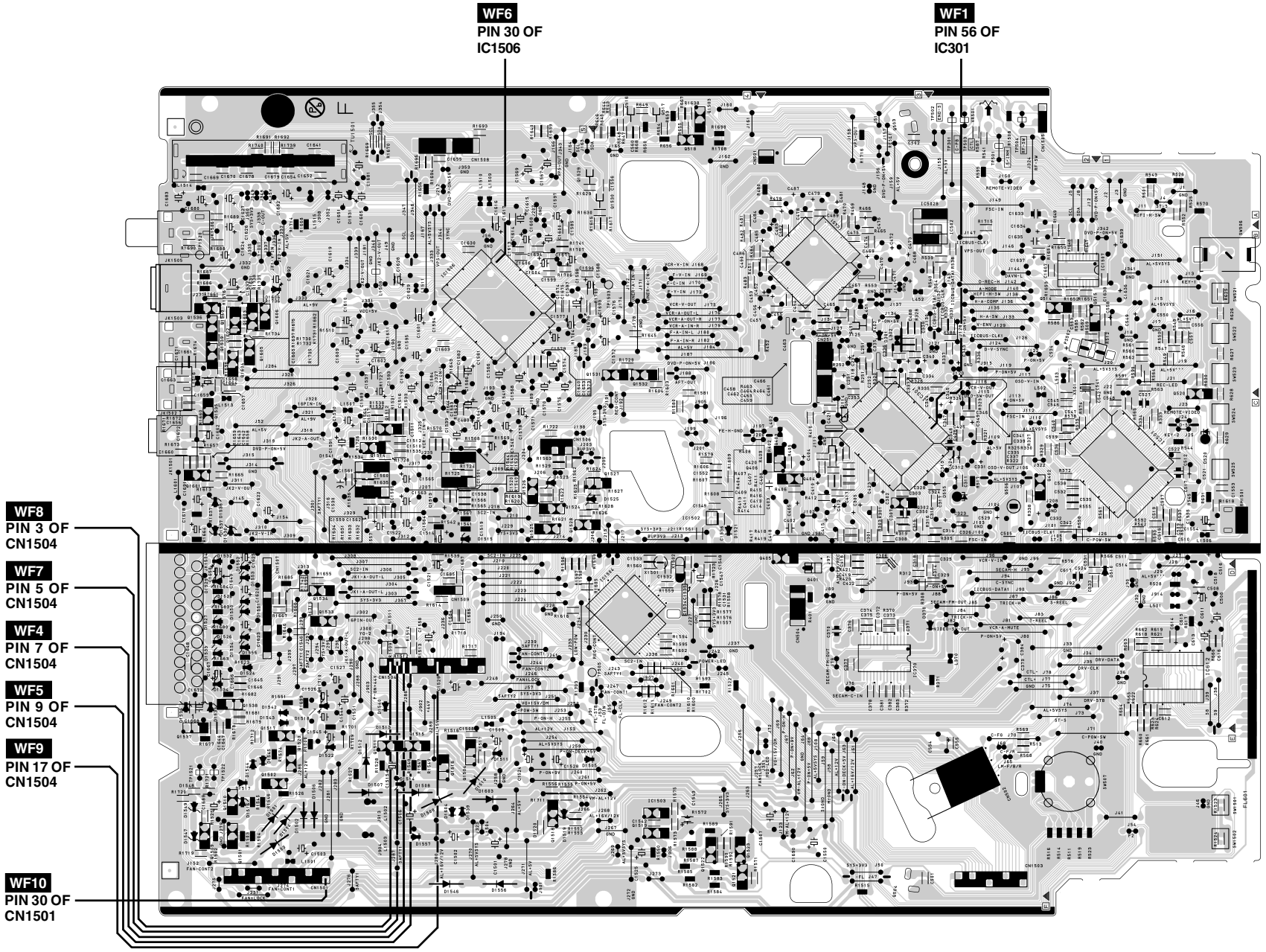



## BOARD SENSOR Top View



## BOARD POWER Bottom View

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.



## BOARD POWER SUPPLY Top View

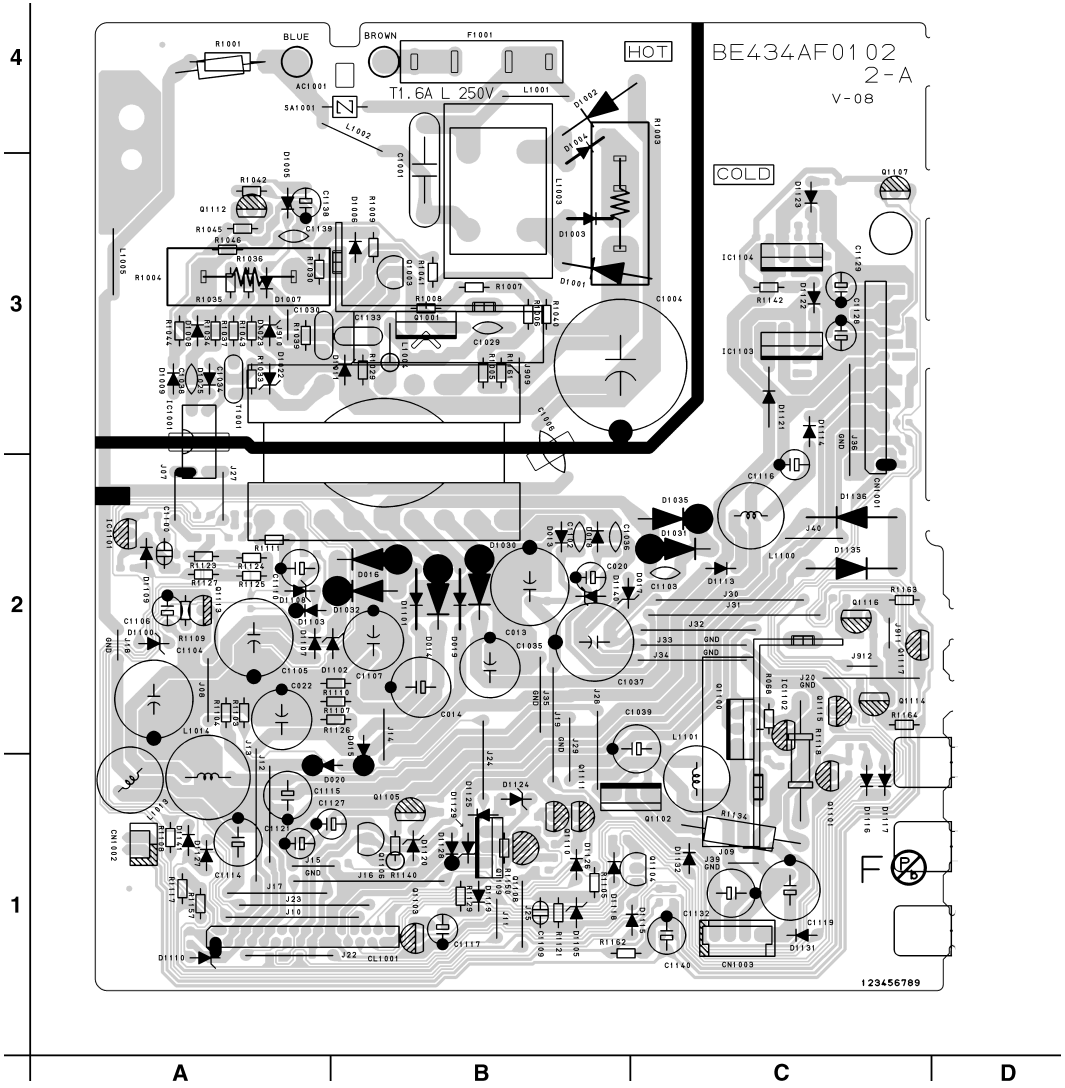
**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.

**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

**CAUTION !**
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

**Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.**



## BOARD POWER SUPPLY Bottom View

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**

**CAUTION !**
For continued protection against fire hazard, replace only with the same type fuse.

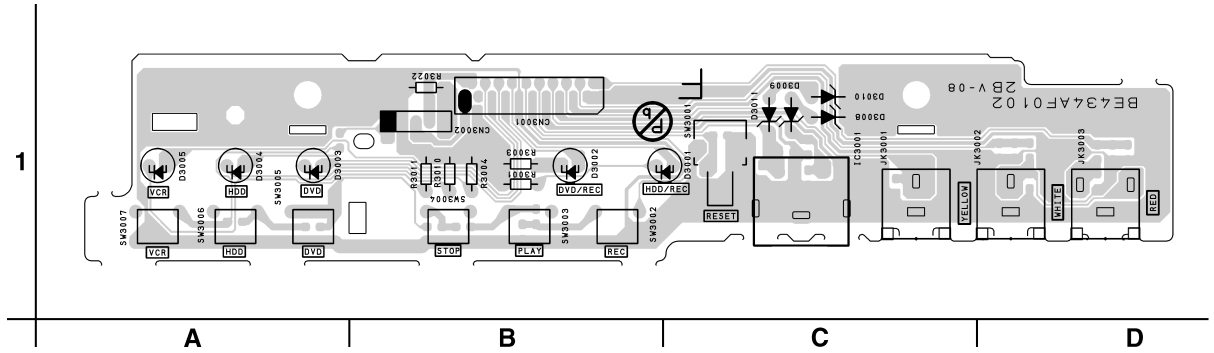
**NOTE:**
The voltage for parts in hot circuit is measured using hot GND as a common terminal.

**CAUTION !**
Fixed voltage (or Auto voltage selectable) power supply circuit is used in this unit. If Main Fuse (F1001) is blown , check to see that all components in the power supply circuit are not defective before you connect the AC plug to the AC power supply. Otherwise it may cause some components in the power supply circuit to fail.

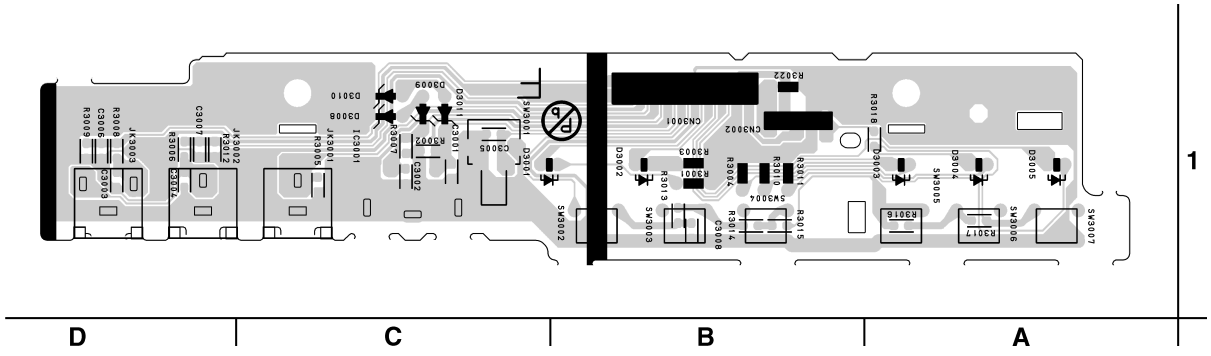
**Because a hot chassis ground is present in the power supply circut, an isolation transformer must be used. Also, in order to have the ability to increase the input slowly, when troubleshooting this type power supply circuit, a variable isolation transformer is required.**

## BOARD FRONT JACK Top View

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.



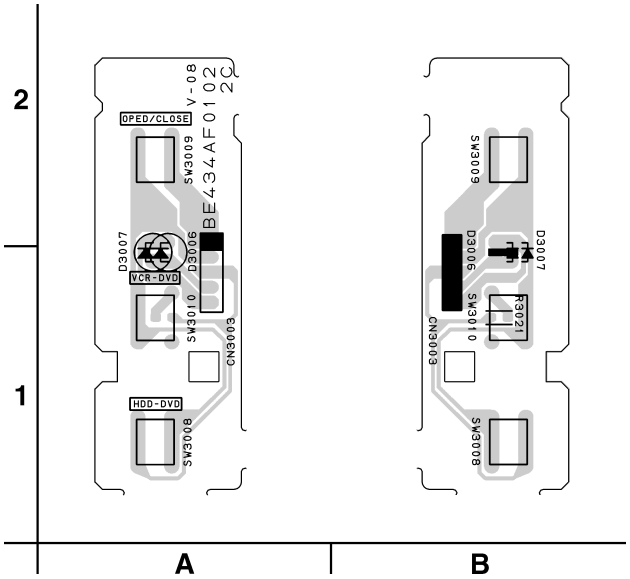

## BOARD FRONT JACK Bottom View




BE434AF01022B

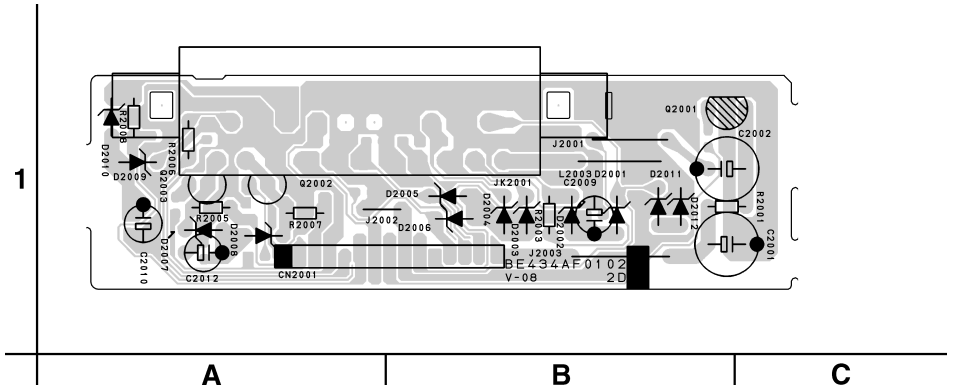
## BOARD SWITCH Top View

## BOARD SWITCH Bottom View



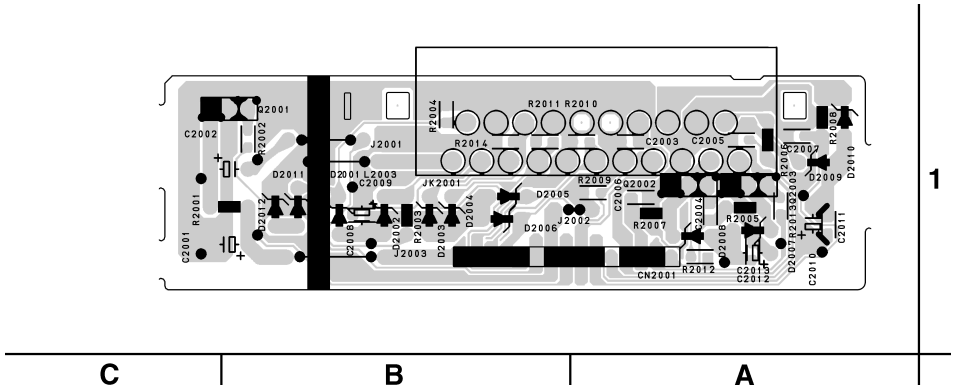

BE434AF01022C

## BOARD REAR JACK Top View



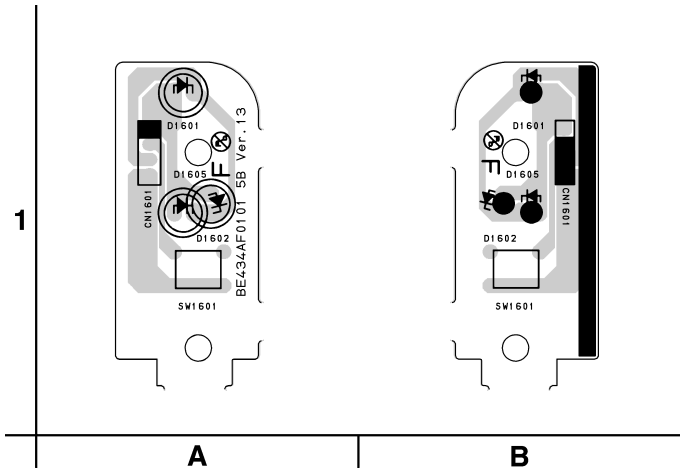

## BOARD REAR JACK Bottom View

NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.




BE434AF01022D

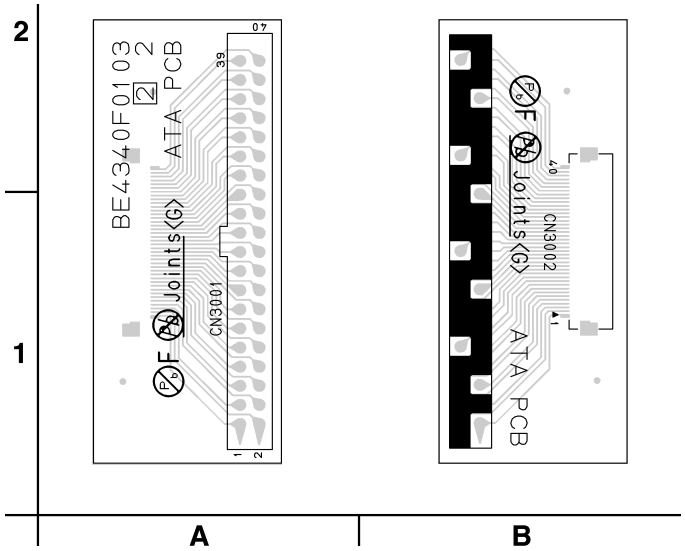
## BOARD POWER SWITCH Top View




## BOARD POWER SWITCH Bottom View

BE434AF01015B

## BOARD ATA Top View

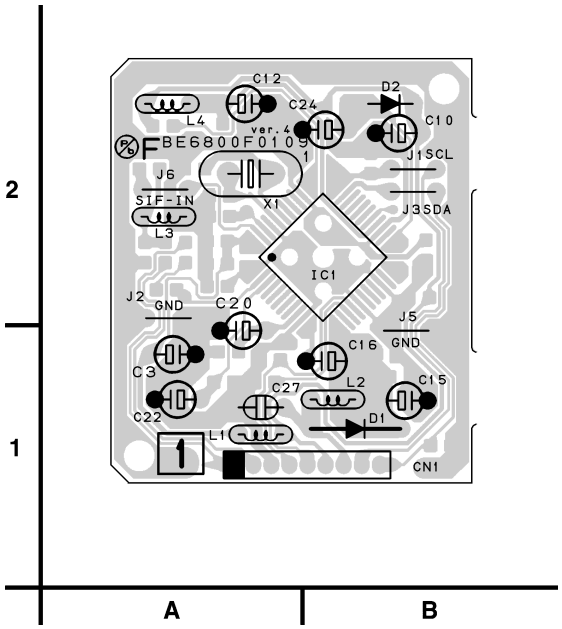



## BOARD ATA Bottom View

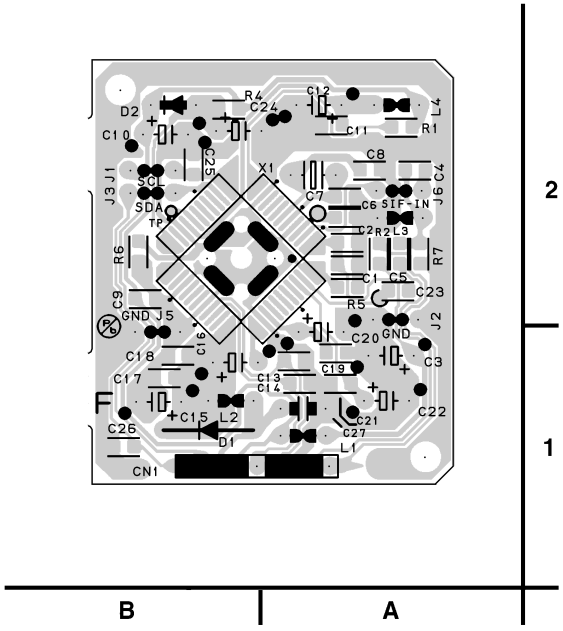



BE4340F01032

## BOARD AFV Top View




## BOARD AFV Bottom View

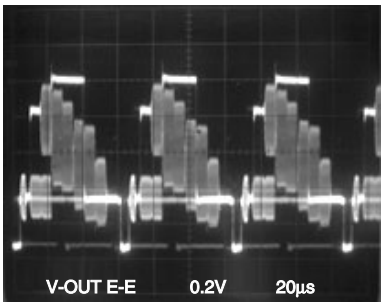



NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.

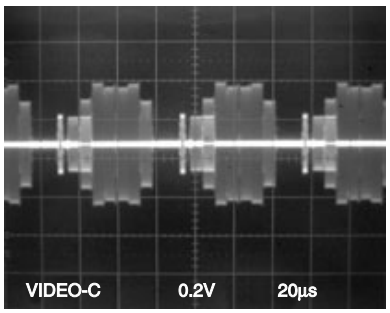
# WAVEFORMS

**NOTE:**
Input: COLOR BAR SIGNAL (WITH 1KHz AUDIO SIGNAL)

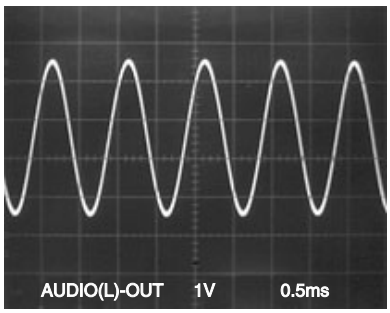
**WF1** Pin 56 of IC301




**WF5** Pin 9 of CN1504

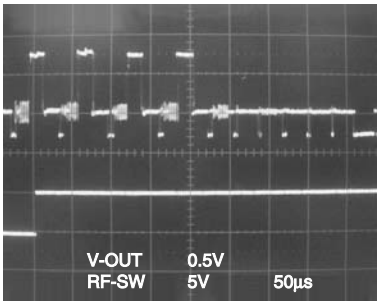



**WF9** Pin 17 of CN1504

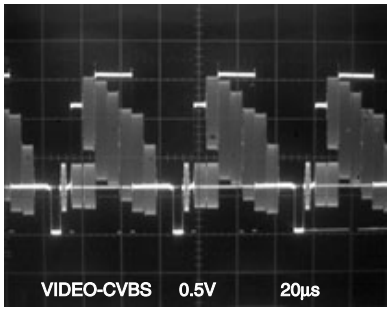



**WF1** UPPER Pin 56 of IC301

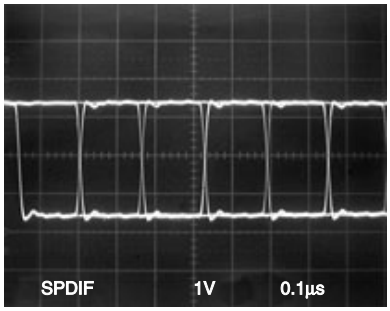
**WF2** LOWER TP504




**WF6** Pin 30 of IC1506

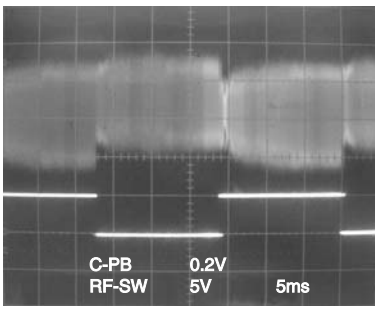



**WF10** Pin 30 of CN1501

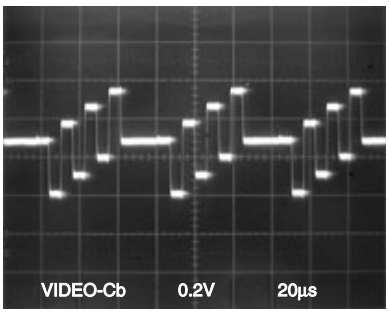



**WF3** UPPER TP301

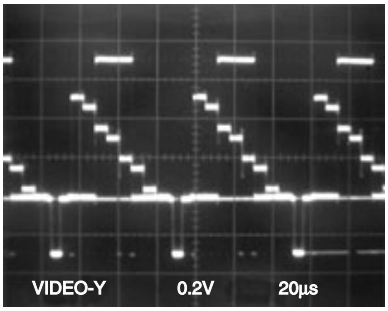
**WF2** LOWER TP504



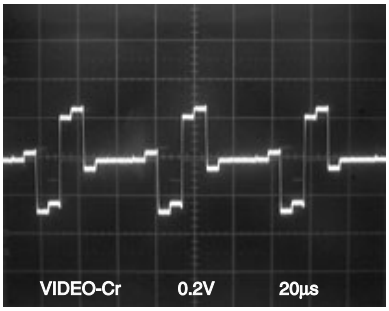

**WF7** Pin 5 of CN1504




**WF4** Pin 7 of CN1504

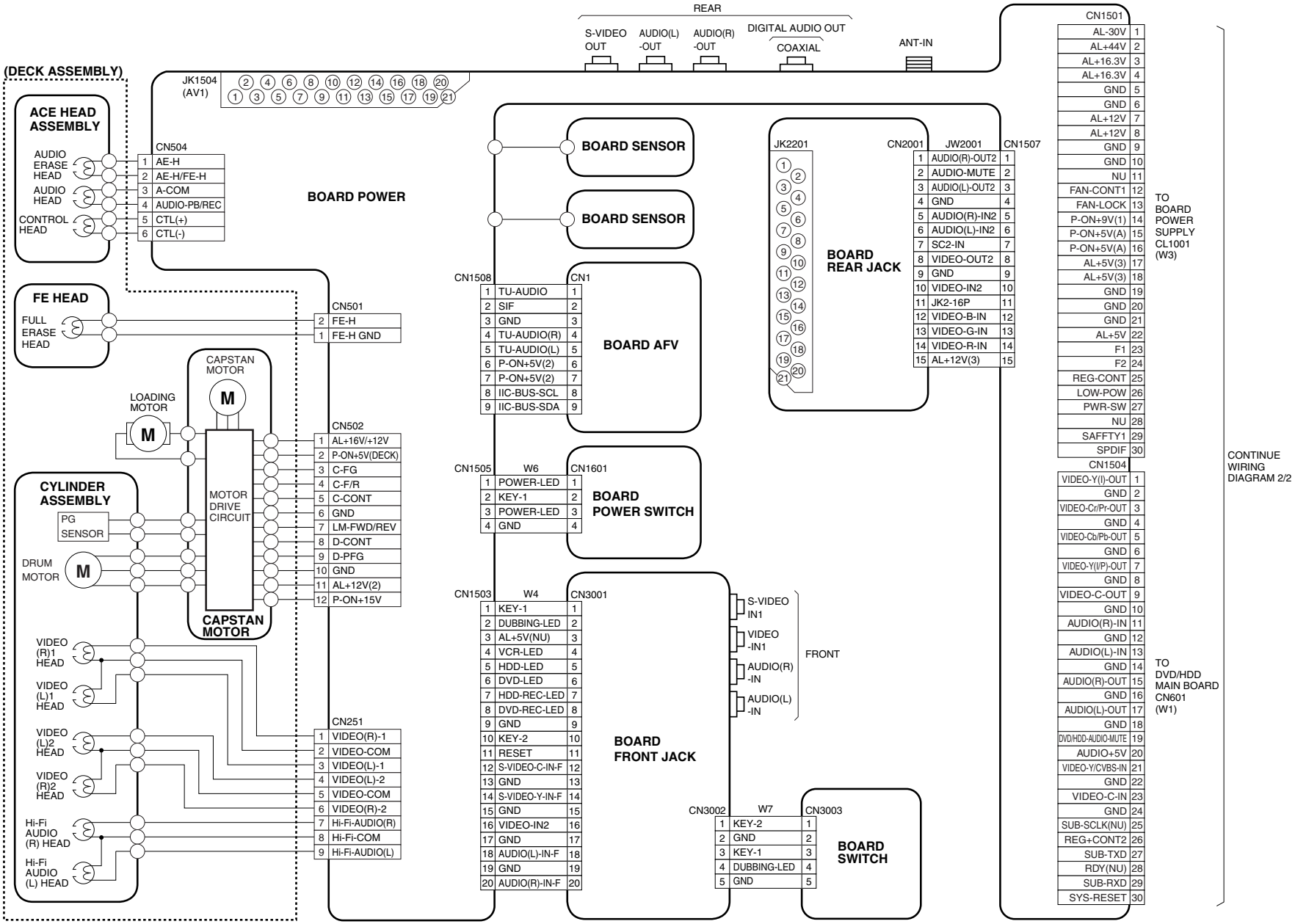



**WF8** Pin 3 of CN1504



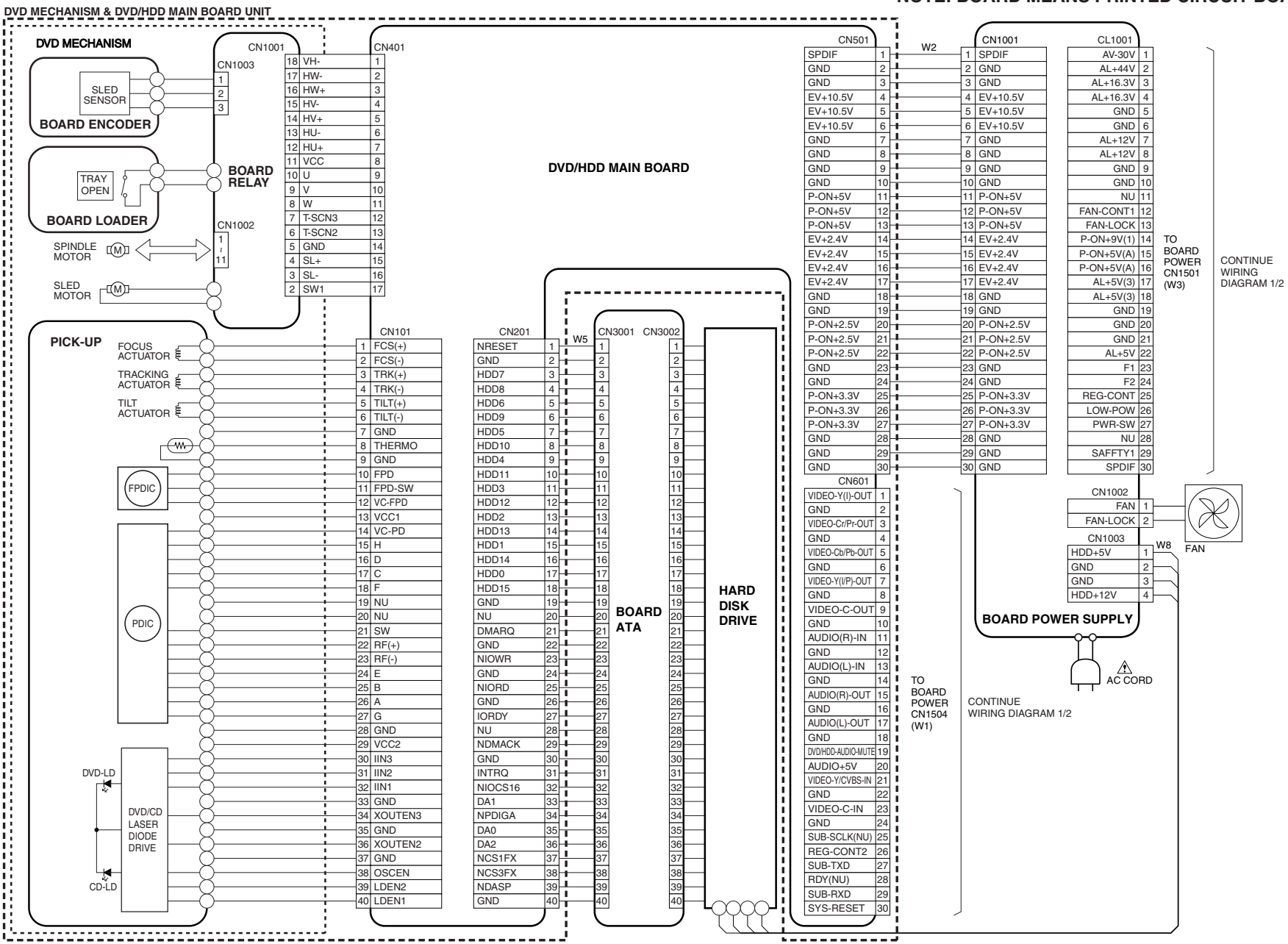
# WIRING DIAGRAM

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**



# WIRING DIAGRAM

**NOTE: BOARD MEANS PRINTED CIRCUIT BOARD.**




| CN1001 | |
|---|---|
| 18 | VH- |
| 17 | HW- |
| 16 | HW+ |
| 15 | HV- |
| 14 | HV+ |
| 13 | HU- |
| 12 | HU+ |
| 11 | VCC |
| 10 | U |
| 9 | V |
| 8 | W |
| 7 | T-SCN3 |
| 6 | T-SCN2 |
| 5 | GND |
| 4 | SL+ |
| 3 | SL- |
| 2 | SW1 |

| CN401 | |
|---|---|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |
| 16 | |
| 17 | |

| CN101 | |
|---|---|
| 1 | FCS(+) |
| 2 | FCS(-) |
| 3 | TRK(+) |
| 4 | TRK(-) |
| 5 | TILT(+) |
| 6 | TILT(-) |
| 7 | GND |
| 8 | THERMO |
| 9 | GND |
| 10 | FPD |
| 11 | FPD-SW |
| 12 | VC-FPD |
| 13 | VCC1 |
| 14 | VC-PD |
| 15 | H |
| 16 | D |
| 17 | C |
| 18 | F |
| 19 | NU |
| 20 | NU |
| 21 | SW |
| 22 | RF(+) |
| 23 | RF(-) |
| 24 | E |
| 25 | B |
| 26 | A |
| 27 | G |
| 28 | GND |
| 29 | VCC2 |
| 30 | IIN3 |
| 31 | IIN2 |
| 32 | IIN1 |
| 33 | GND |
| 34 | XOUTEN3 |
| 35 | GND |
| 36 | XOUTEN2 |
| 37 | GND |
| 38 | OSCEN |
| 39 | LDEN2 |
| 40 | LDEN1 |

| CN201 | |
|---|---|
| 1 | NRESET |
| 2 | GND |
| 3 | HDD7 |
| 4 | HDD8 |
| 5 | HDD6 |
| 6 | HDD9 |
| 7 | HDD5 |
| 8 | HDD10 |
| 9 | HDD4 |
| 10 | HDD11 |
| 11 | HDD3 |
| 12 | HDD12 |
| 13 | HDD2 |
| 14 | HDD13 |
| 15 | HDD1 |
| 16 | HDD14 |
| 17 | HDD0 |
| 18 | HDD15 |
| 19 | GND |
| 20 | NU |
| 21 | DMARQ |
| 22 | GND |
| 23 | NIOWR |
| 24 | GND |
| 25 | NIORD |
| 26 | GND |
| 27 | IORDY |
| 28 | NU |
| 29 | NDMACK |
| 30 | GND |
| 31 | INTRQ |
| 32 | NIOCS16 |
| 33 | DA1 |
| 34 | NPDIGA |
| 35 | DA0 |
| 36 | DA2 |
| 37 | NCS1FX |
| 38 | NCS3FX |
| 39 | NDASP |
| 40 | GND |

| W5 | CN3001 | CN3002 |
|---|---|---|
| | 1 | 1 |
| | 2 | 2 |
| | 3 | 3 |
| | 4 | 4 |
| | 5 | 5 |
| | 6 | 6 |
| | 7 | 7 |
| | 8 | 8 |
| | 9 | 9 |
| | 10 | 10 |
| | 11 | 11 |
| | 12 | 12 |
| | 13 | 13 |
| | 14 | 14 |
| | 15 | 15 |
| | 16 | 16 |
| | 17 | 17 |
| | 18 | 18 |
| | 19 | 19 |
| | 20 | 20 |
| | 21 | 21 |
| | 22 | 22 |
| | 23 | 23 |
| | 24 | 24 |
| | 25 | 25 |
| | 26 | 26 |
| | 27 | 27 |
| | 28 | 28 |
| | 29 | 29 |
| | 30 | 30 |
| | 31 | 31 |
| | 32 | 32 |
| | 33 | 33 |
| | 34 | 34 |
| | 35 | 35 |
| | 36 | 36 |
| | 37 | 37 |
| | 38 | 38 |
| | 39 | 39 |
| | 40 | 40 |

| CN501 | |
|---|---|
| SPDIF | 1 |
| GND | 2 |
| GND | 3 |
| EV+10.5V | 4 |
| EV+10.5V | 5 |
| EV+10.5V | 6 |
| GND | 7 |
| GND | 8 |
| GND | 9 |
| GND | 10 |
| P-ON+5V | 11 |
| P-ON+5V | 12 |
| P-ON+5V | 13 |
| EV+2.4V | 14 |
| EV+2.4V | 15 |
| EV+2.4V | 16 |
| EV+2.4V | 17 |
| GND | 18 |
| GND | 19 |
| P-ON+2.5V | 20 |
| P-ON+2.5V | 21 |
| P-ON+2.5V | 22 |
| GND | 23 |
| GND | 24 |
| P-ON+3.3V | 25 |
| P-ON+3.3V | 26 |
| P-ON+3.3V | 27 |
| GND | 28 |
| GND | 29 |
| GND | 30 |

| W2 | CN1001 | |
|---|---|---|
| 1 | SPDIF | |
| 2 | GND | |
| 3 | GND | |
| 4 | EV+10.5V | |
| 5 | EV+10.5V | |
| 6 | EV+10.5V | |
| 7 | GND | |
| 8 | GND | |
| 9 | GND | |
| 10 | GND | |
| 11 | P-ON+5V | |
| 12 | P-ON+5V | |
| 13 | P-ON+5V | |
| 14 | EV+2.4V | |
| 15 | EV+2.4V | |
| 16 | EV+2.4V | |
| 17 | EV+2.4V | |
| 18 | GND | |
| 19 | GND | |
| 20 | P-ON+2.5V | |
| 21 | P-ON+2.5V | |
| 22 | P-ON+2.5V | |
| 23 | GND | |
| 24 | GND | |
| 25 | P-ON+3.3V | |
| 26 | P-ON+3.3V | |
| 27 | P-ON+3.3V | |
| 28 | GND | |
| 29 | GND | |
| 30 | GND | |

| CL1001 | |
|---|---|
| AV-30V | 1 |
| AL+44V | 2 |
| AL+16.3V | 3 |
| AL+16.3V | 4 |
| GND | 5 |
| GND | 6 |
| AL+12V | 7 |
| AL+12V | 8 |
| GND | 9 |
| GND | 10 |
| NU | 11 |
| FAN-CONT1 | 12 |
| FAN-LOCK | 13 |
| P-ON+9V(1) | 14 |
| P-ON+5V(A) | 15 |
| P-ON+5V(A) | 16 |
| AL+5V(3) | 17 |
| AL+5V(3) | 18 |
| GND | 19 |
| GND | 20 |
| GND | 21 |
| AL+5V | 22 |
| F1 | 23 |
| F2 | 24 |
| REG-CONT | 25 |
| LOW-POW | 26 |
| PWR-SW | 27 |
| NU | 28 |
| SAFFTY1 | 29 |
| SPDIF | 30 |

| CN601 | |
|---|---|
| VIDEO-Y(I)-OUT | 1 |
| GND | 2 |
| VIDEO-Cr/Pr-OUT | 3 |
| GND | 4 |
| VIDEO-Cb/Pb-OUT | 5 |
| GND | 6 |
| VIDEO-Y(I/P)-OUT | 7 |
| GND | 8 |
| VIDEO-C-OUT | 9 |
| GND | 10 |
| AUDIO(R)-IN | 11 |
| GND | 12 |
| AUDIO(L)-IN | 13 |
| GND | 14 |
| AUDIO(R)-OUT | 15 |
| GND | 16 |
| AUDIO(L)-OUT | 17 |
| GND | 18 |
| DVD/HDD-AUDIO-MUTE | 19 |
| AUDIO+5V | 20 |
| VIDEO-Y/CVBS-IN | 21 |
| GND | 22 |
| VIDEO-C-IN | 23 |
| GND | 24 |
| SUB-SCLK(NU) | 25 |
| REG-CONT2 | 26 |
| SUB-TXD | 27 |
| RDY(NU) | 28 |
| SUB-RXD | 29 |
| SYS-RESET | 30 |

| CN1002 | |
|---|---|
| FAN | 1 |
| FAN-LOCK | 2 |

| CN1003 | |
|---|---|
| HDD+5V | 1 |
| GND | 2 |
| GND | 3 |
| HDD+12V | 4 |

# IC PIN FUNCTION DESCRIPTIONS

## < VCR Section >

**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

### IC501( SERVO / SYSTEM CONTROL IC )

| Pin No. | Mark | IN/ OUT | Signal Name | Function |
|---|---|---|---|---|
| 1 | | - | NU | Not Used |
| 2 | | IN | PG-DELAY | Video Head Switching Pulse Signal Adjusted Voltage |
| 3 | | IN | POW-SAF | Abnormal Voltage Detection |
| 4 | | IN | END-S | Tape End Position Detect Signal |
| 5 | | - | NU | Not Used |
| 6 | | IN | V-ENV | Video Envelope Comparator Signal |
| 7 | | IN | KEY-1 | Key Scan Input Signal 1 |
| 8 | | IN | KEY-2 | Key Scan Input Signal 2 |
| 9 | | IN | LD-SW | Deck Mode Position Detector Signal |
| 10 | | IN | ST-S | Tape Start Position Detector Signal |
| 11 | | - | NU | Not Used |
| 12 | | - | NU | Not Used |
| 13 | | OUT | D-V- SYNC | Dummy V-sync Output |
| 14 | | IN | REMOCON -IN | Remote Control Sensor |
| 15 | | OUT | C-ROTA | Color Phase Rotary Changeover SIgnal |
| 16 | | OUT | H-A-SW | Video Head Amp Switching Pulse |
| 17 | | IN | H-A-COMP | Head Amp Comparator Signal |
| 18 | | OUT | RF-SW | Video Head Switching Pulse |
| 19 | | OUT | Hi-Fi-H-SW | HiFi Audio Head Switching Pulse |
| 20 | | - | NU | Not Used |
| 21 | | - | NU | Not Used |
| 22 | | - | NU | Not Used |
| 23 | | - | NU | Not Used |
| 24 | | - | NU | Not Used |
| 25 | | - | NU | Not Used |
| 26 | | OUT | REC-LED | Rec Mode LED Signal Output |
| 27 | | - | NU | Not Used |
| 28 | | - | NU | Not Used |
| 29 | | - | NU | Not Used |
| 30 | | - | NU | Not Used |
| 31 | | IN | REC-SAF-SW | Recording Safety SW Detect (With Record tab="L"/ With out Record tab="H") |
| 32 | | IN | A-MODE | Hi-Fi Tape Detection Signal |
| 33 | | OUT | D-REC-H | Delayed Record Signal |
| 34 | | IN | RESET | System Reset Signal (Reset="L") |
| 35 | | IN | Xcin | Sub Clock |
| 36 | | OUT | Xcout | Sub Clock |
| 37 | | - | Vcc | Vcc |
| 38 | | IN | Xin | Main Clock Input |
| 39 | | OUT | Xout | Main Clock Input |
| 40 | | - | GND | Vss(GND) |
| 41 | | - | NU | Not Used |
| 42 | | - | NU | Not Used |
| 43 | | IN | CLKSEL | Clock Select (GND) |
| 44 | | IN | OSCin | Clock Input for letter size |
| 45 | | OUT | OSCout | Clock Output for letter size |
| 46 | | - | NUB | Not Used |
| 47 | | IN | LP | LP |
| 48 | | IN | FSC-IN [4.43MHz] | 4.43MHz Clock Input |
| 49 | | - | OSDVss | OSDVss |
| 50 | | IN | OSD-V-IN | OSD Video Signal Input |
| 51 | | - | LECHA | Not Used |
| 52 | | OUT | OSD-V-OUT | OSD Video Signal Output |
| 53 | | - | OSDVcc | OSDVcc |
| 54 | | - | HLF | LPF Connected Terminal (Slicer) |
| 55 | A,C | IN | COLOR-IN | SECAM or MESECAM Chroma Video Input Signal at Super Impose |
| | B | - | NU | Not Used |
| 56 | | - | NU | Not Used |
| 57 | | - | NU | Not Used |
| 58 | | IN | C-CYNC | Composite Synchronized Pulse |
| 59 | | - | NU | Not Used |

| Pin No. | Mark | IN/ OUT | Signal Name | Function |
|---|---|---|---|---|
| 60 | | OUT | C-POW-SW | Capstan Power Switching Signal |
| 61 | A,B | - | NU | Not Used |
| | C | IN | SECAM-H | SECAM Mode at High |
| 62 | A,B | - | NU | Not Used |
| | C | OUT | TRICK-H | Special playback = "H" in SECAM Mode |
| 63 | | - | NU | Not Used |
| 64 | | IN | S-CS | Sub Micro Controller Interface Chip Select Signal Input |
| 65 | | OUT | S-DATA-OUT | Communication of Data from VCR Micro Controller |
| 66 | | IN | S-DATA-IN | Communication of Data to VCR Micro Controller |
| 67 | | OUT | S-CLOCK | Communication of Clock with VCR Micro Controller |
| 68 | | OUT | DRV-DATA | VFD Driver IC Control Data |
| 69 | | OUT | DRV-STB | VFD Driver IC Chip Select Signal |
| 70 | | OUT | DRV-CLK | VFD Driver IC Control Clock |
| 71 | | OUT | IIC-BUS-SCL | IIC BUS Control Clock |
| 72 | | IN/ OUT | IIC-BUS-SDA | IIC BUS Control Data |
| 73 | | - | NU | Not Used |
| 74 | | - | NU | Not Used |
| 75 | | OUT | P-ON-H | Power On Signal to High |
| 76 | | OUT | C-CONT | Capstan Motor Control Signal |
| 77 | | OUT | D-CONT | Drum Motor Control Signal |
| 78 | | OUT | C-F/R | Capstan Motor FWD/ REV Control Signal (FWD="L"/REV="H") |
| 79 | | IN | S-REEL | Supply Reel Rotation Signal |
| 80 | | IN | T-REEL | Take Up Reel Rotation Signal |
| 81 | | OUT | LM-FWD/ REV | Loading Motor Control Signal |
| 82 | | - | NU | Not Used |
| 83 | | OUT | VCR-AUDIO-MUTE | Audio Mute Control Signal (Mute = "H") |
| 84 | | - | NU | Not Used |
| 85 | | - | NU | Not Used |
| 86 | | - | NU | Not Used |
| 87 | | IN | C-FG | Capstan Motor Rotation Detection Pulse |
| 88 | | - | AMPVss | AMPVss |
| 89 | | - | GND | GND |
| 90 | | IN | D-PFG | Drum Motor Phase/ Frequency Generator |
| 91 | | - | AMPVREF out | V-Ref for CTL AMP |
| 92 | | - | AMPVREF in | V-Ref for CTL AMP |
| 93 | | - | P80/C | P80/C Terminal |
| 94 | | IN/ OUT | CTL (-) | Playback/Record Control Signal (-) |
| 95 | | IN/ OUT | CTL (+) | Playback/Record Control Signal (+) |
| 96 | | - | AMPC | CTL AMP Connected Terminal |
| 97 | | - | CTL | To Monitor for CTL AMP Output |
| 98 | | - | AMPVcc | AMPVcc |
| 99 | | - | AVcc | A/D Converter Power Input/ Standard Voltage Input |
| 100 | | - | NU | Not Used |

**Notes:**

Abbreviation for Active Level:

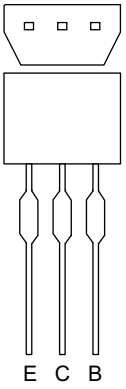
PWM -----Pulse Wide Modulation

A/D--------Analog - Digital Converter

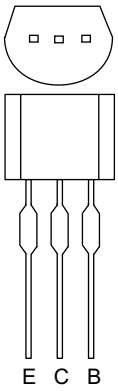
## IC612 (FRONT PANEL CONTROL)

| Pin No. | IN/ OUT | Signal Name | Function |
|---|---|---|---|
| 1 | IN | CLK | Clock Input |
| 2 | IN | STB | Serial Interface Strobe |
| 3 | - | NU | Not Used |
| 4 | - | NU | Not Used |
| 5 | - | VSS | GND |
| 6 | - | VDD | Power Supply |
| 7 | OUT | a | Segment Output |
| 8 | OUT | b | |
| 9 | OUT | c | |
| 10 | OUT | d | |
| 11 | OUT | e | |
| 12 | IN | f | |
| 13 | IN | g | |
| 14 | OUT | h | |
| 15 | - | VEE | Pull Down Level |
| 16 | OUT | i | Segment Output |
| 17 | OUT | 7G | Grid Output |
| 18 | | 6G | |
| 19 | | 5G | |
| 20 | | 4G | |
| 21 | | 3G | |
| 22 | | 2G | |
| 23 | | 1G | |
| 24 | - | VDD | Power Supply |
| 25 | - | VSS | GND |
| 26 | IN | OSC | Oscillator Input |
| 27 | - | NU | Not Used |
| 28 | IN | DIN | Serial Data Input |

# LEAD IDENTIFICATIONS

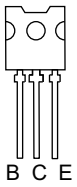



KRA103M-AT/P
KRA104M-AT/P
KRC103M-AT/P
KTA-1266-GR-AT/P
KTA1267Y-AT/P
KTA1281Y-AT/P
KTC3193-Y-AT/P
KTC3199-(BL,Y)-AT/P

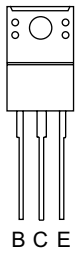



2SC2120-(Y)(TE2 F T)
KTC3203-Y-AT/P
KTC3205-Y-AT/P
KTC3198-Y-AT/P
KTC3266-Y-AT/P

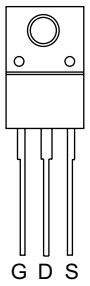
S2Y52



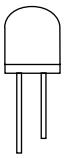

KTC2026-Y/P



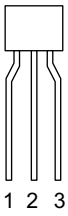

2SK3798(Q)



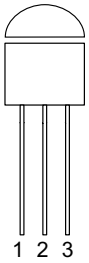

PT204-6B-12



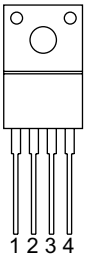

KRC106M-AT/P



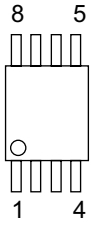

KIA431-AT/P



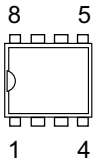

PQ070XF01SZH



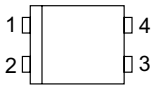

KIA4558P/P



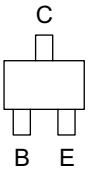

UTC4580



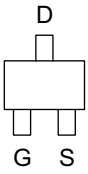

EL817A



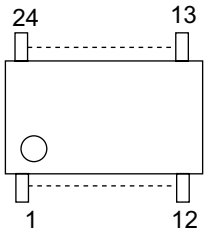

KRC103S-RTK/P
KTC3875S-(GR,Y)-RTK/P



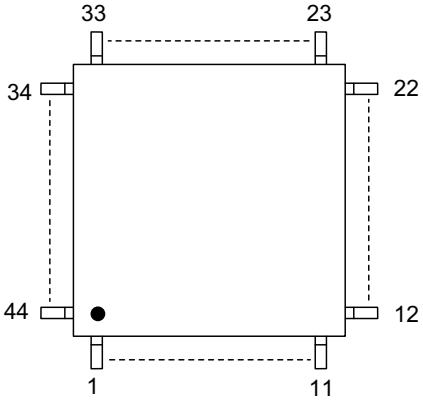

SSM3K15F(TE85L F)



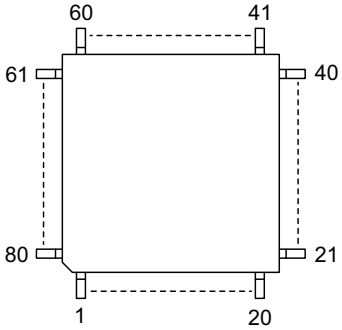

LC74793JM-TLM-E



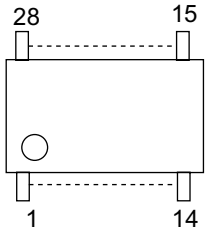

MSP3417G-QG-B8-V3



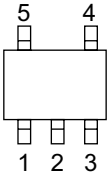

LA72648M-MPB-E



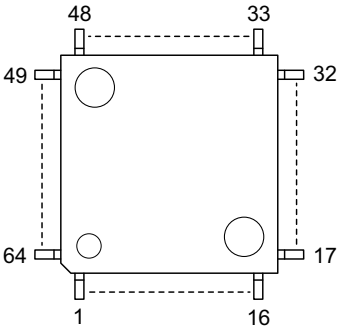

PT6313-S-TP(L)



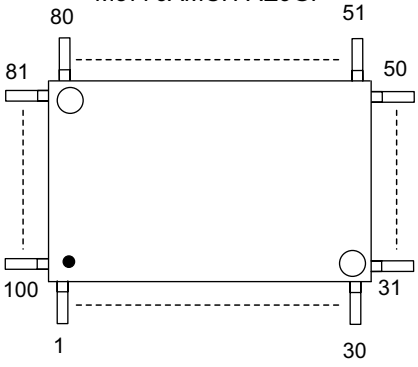

BU4219G-TR
PST3619NR
R3112N191A-TR-FA
R3112N191A-TR-FB



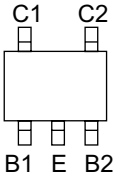

MN101C77A FL1




HA118326APF-E
LA71750EM-MPB-E
M3776AMCH-AE9GP



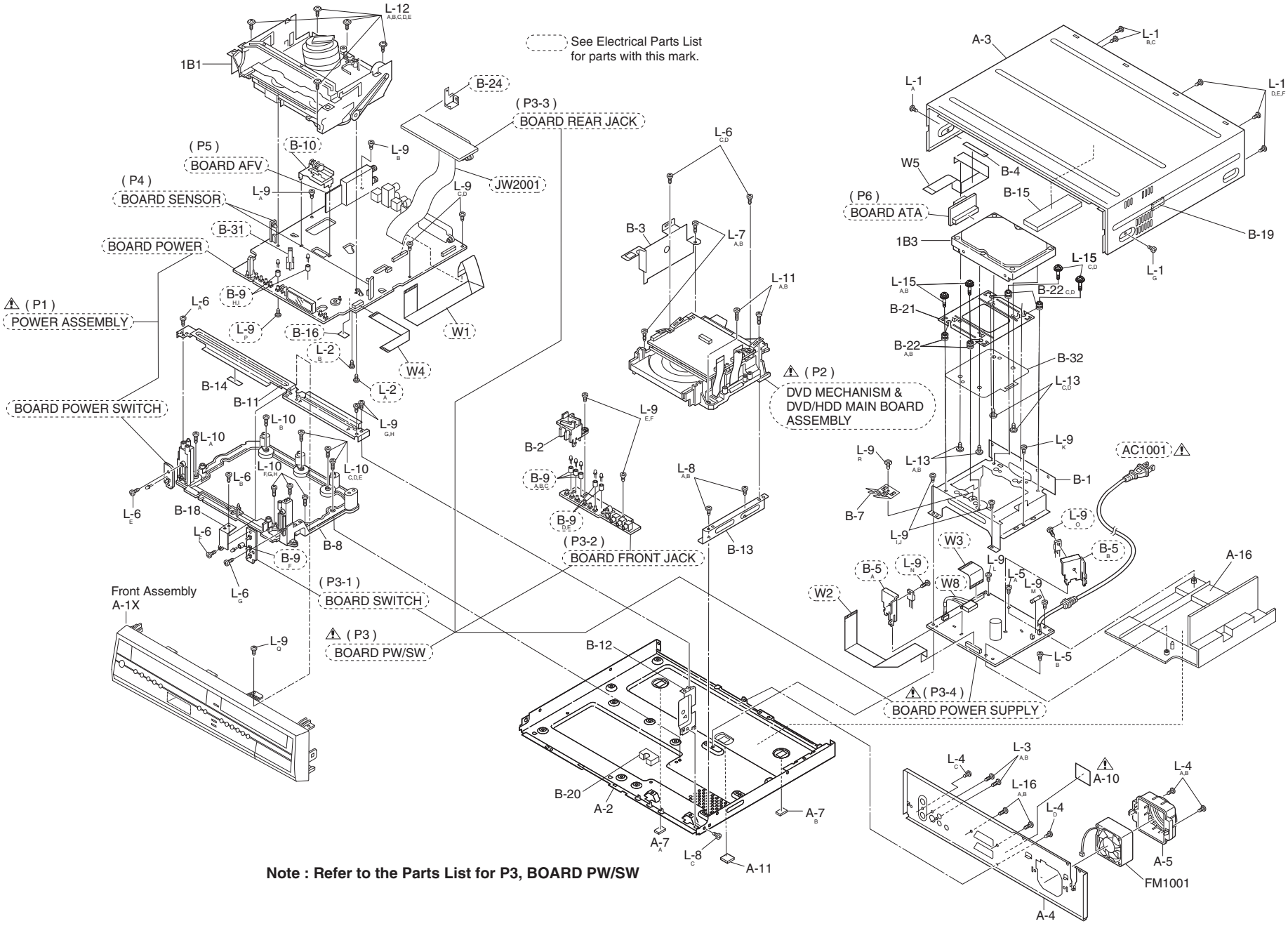

RN1511(TE85R.F)




**Note:**
A: Anode
K: Cathode
E: Emitter
C: Collector
B: Base
R: Reference
S: Source
G: Gate
D: Drain

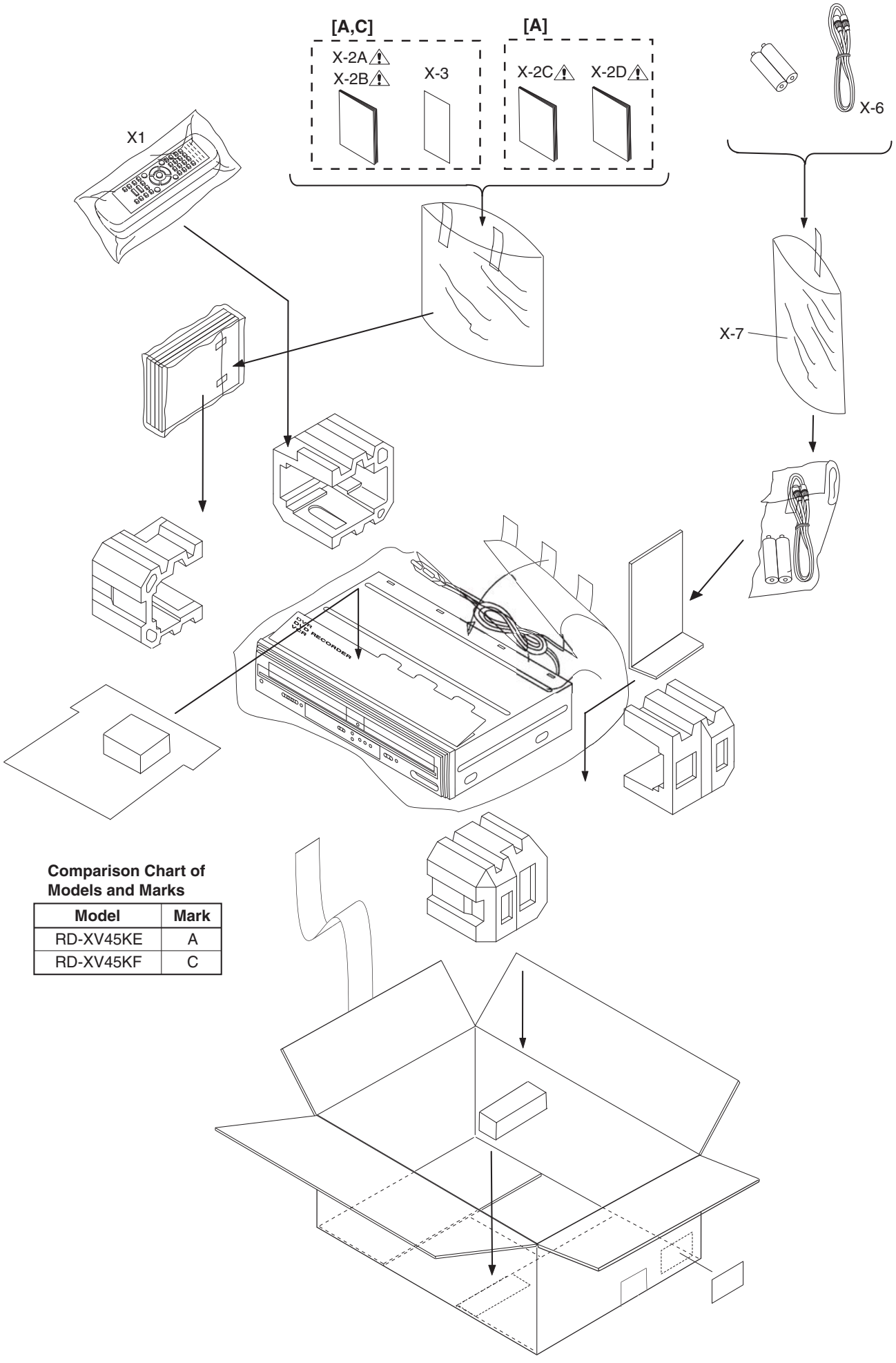
# EXPLODED VIEWS

## Cabinet




**Note : Refer to the Parts List for P3, BOARD PW/SW**

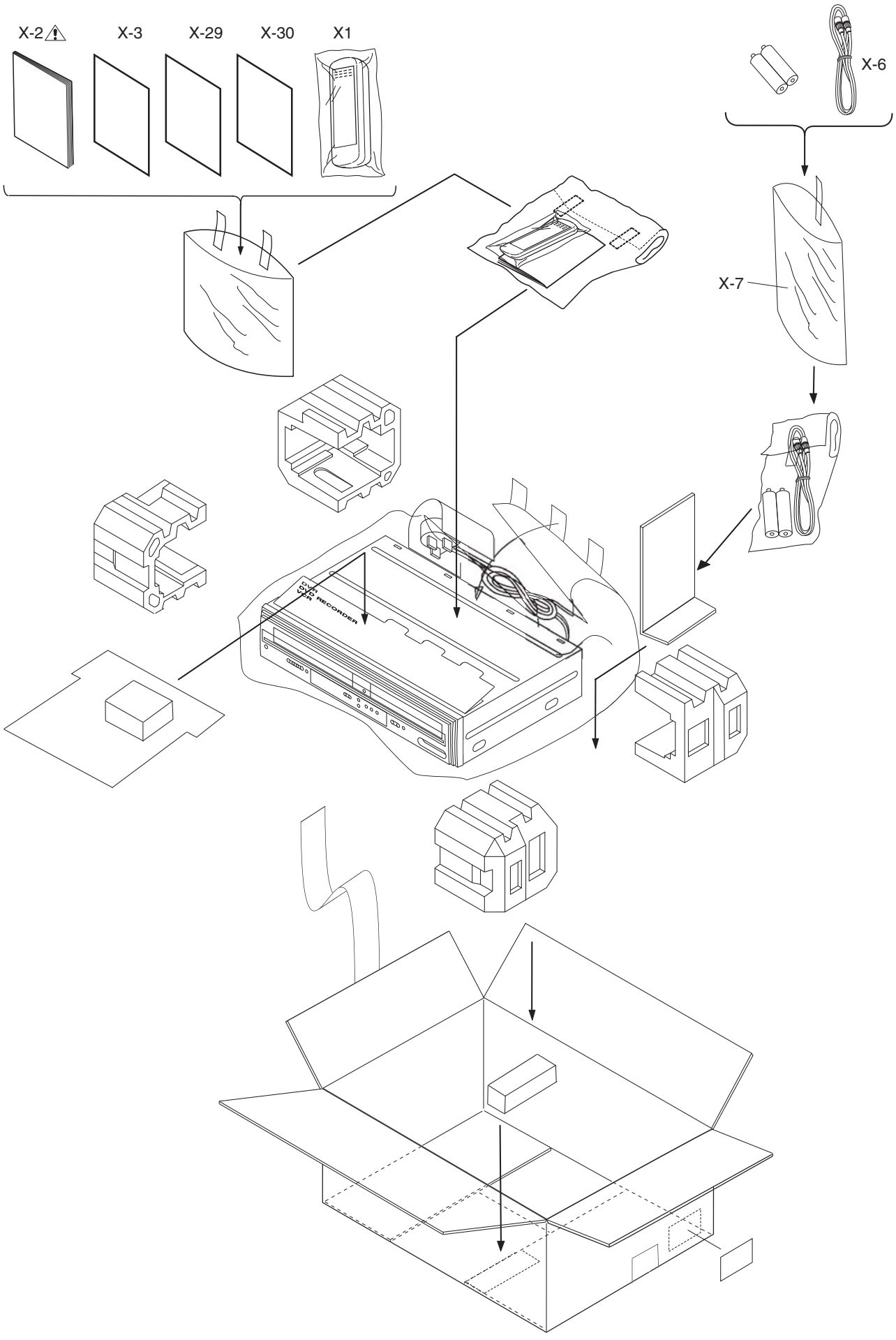
# Packing [RD-XV45KE/RD-XV45KF]




**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KF | C |

## Packing [RD-XV45KB]



# MECHANICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

### Comparison Chart of Models and Marks

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | A-1X | A,B | P000472660 | 1VM222628 | PANEL FRONT E439AED |
| | A-1X | C | P000473010 | 1VM222634 | PANEL FRONT E439CFD |
| | A-2 | | | 1VM120193G | MAIN CHASSIS E4340UD |
| | A-3 | | P000472670 | 1VM323139 | COVER TOP(BLACK) E439AED |
| | A-5 | | | 1VM220745 | FAN HOLDER E4340UD |
| | A-7A | | | 0VM416122 | FOOT E6500UD |
| | A-7B | | | 0VM416122 | FOOT E6500UD |
| | A-11 | | | 1VM422956 | CENTER CUSHION E4350JD |
| | A-16 | | | 1VM322233 | POWER HOLDER E434AED |
| | 1B1 | | P000472770 | N25E1FL | DECK ASSEMBLY CZD014/VM25E0 |
| | 1B3 | | P000472830 | UHDD160WG001 | HARD DISK DRIVE WD1600BB-55GUC0 |
| | B-1 | | | 1VM220719D | HDD BRACKET E4340UD |
| | B-2 | | | 1VM422056 | MODE LENS HOLDER E4340UD |
| | B-3 | | | 1VM321081 | WIRE SHEET E4340UD |
| | B-4 | | | 1VM422058 | TAPE HIMELON(HDD) E4340UD |
| | B-7 | | | 0VM414677A | PLATE EARTH E4321JD DV-HD300 |
| | B-8 | | | 1VM120055D | DECK PEDESTAL E9600UD |
| | B-11 | | | 0VM204534C | FRONT BRACKET E9400UD |
| | B-12 | | | 0VM416269A | FRONT BRACKET R E9400UD |
| | B-13 | | | 1VM421062C | BRACKET R E9600UD |
| | B-14 | | | 0VM413956 | TAPE HIMELON H9206JD |
| | B-15 | | | 1VM422515 | RUBBER CUSHION(COVER TOP) E4340UD |
| | B-18 | | | 1VM422518 | FRONT SUPPORT E4340UD |
| | B-19 | | | 1VM422517 | SIDE CUSHION(COVER TOP) E4340UD |
| | B-20 | | | 1VM422534 | RUBBER CUSHION (MAIN CHASSIS) E4340UD |
| | B-21 | | | 1VM423119 | HDD SUPPORT (USA) E4340UD |
| | B-22A | | P000472680 | 1VM422863 | HDD RUBBER E4350JD |
| | B-22B | | | 1VM422863 | HDD RUBBER E4350JD |
| | B-22C | | | 1VM422863 | HDD RUBBER E4350JD |
| | B-22D | | | 1VM422863 | HDD RUBBER E4350JD |
| | B-32 | | | 1VM424477 | INSULATION SHEET E434AED |
| | FM1001 | | P000472760 | MMEZR12NM005 | DC FAN MOTOR 2410RL-04W-S20-C01 |
| | L-1A | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1B | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1C | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1D | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1E | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1F | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-1G | | | GBHC3050 | SCREW TAP TIGHT M3X5 BIND HEAD+BLK NI |
| | L-3A | | | GBHB3080 | SCREW B-TIGHT M3X8 BIND HEAD+ |
| | L-3B | | | GBHB3080 | SCREW B-TIGHT M3X8 BIND HEAD+ |
| | L-4A | | | GBHS3050 | SCREW S-TIGHT M3*5 BIND+ 3*5 BIND+ |
| | L-4B | | | GBHS3050 | SCREW S-TIGHT M3*5 BIND+ 3*5 BIND+ |
| | L-4C | | | GBHS3050 | SCREW S-TIGHT M3*5 BIND+ 3*5 BIND+ |
| | L-4D | | | GBHS3050 | SCREW S-TIGHT M3*5 BIND+ 3*5 BIND+ |
| | L-5A | | | GBJP3060 | SCREW P-TIGHT M3X6 BIND HEAD+ |
| | L-5B | | | GBJP3060 | SCREW P-TIGHT M3X6 BIND HEAD+ |
| | L-6A | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6B | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6C | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6D | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6E | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6F | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-6G | | | GBJP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-7A | | | GBJP3120 | SCREW P-TIGHT M3*12 BIND+ |
| | L-7B | | | GBJP3120 | SCREW P-TIGHT M3*12 BIND+ |
| | L-8A | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-8B | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-8C | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9A | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9B | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9C | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9D | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9E | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9F | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9G | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9H | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9I | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9J | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9K | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9L | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9M | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | L-9Q | | | 0VM412937A | SCREW C-TIGHT M3X6 E5610UD |
| | L-9R | | | GBJS3060 | SCREW S-TIGHT M3X6 BIND HEAD+ |
| | L-10A | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10B | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10C | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10D | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10E | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10F | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10G | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-10H | | | 0VM413320A | SCREW S-TIGHT 3X8 H9210UD |
| | L-11A | | | GBJS3100 | SCREW S-TIGHT M3X10 BIND HEAD+ |
| | L-11B | | | GBJS3100 | SCREW S-TIGHT M3X10 BIND HEAD+ |
| | L-12A | | | GCJP3100 | SCREW P-TIGHT M3*10 WASHERHEAD+ |
| | L-12B | | | GCJP3100 | SCREW P-TIGHT M3*10 WASHERHEAD+ |
| | L-12C | | | GCJP3100 | SCREW P-TIGHT M3*10 WASHERHEAD+ |
| | L-12D | | | GCJP3100 | SCREW P-TIGHT M3*10 WASHERHEAD+ |
| | L-12E | | | GCJP3100 | SCREW P-TIGHT M3*10 WASHERHEAD+ |
| | L-13A | | | SAC3T050 | INCH SCREW 3.4X5 + |
| | L-13B | | | SAC3T050 | INCH SCREW 3.4X5 + |
| | L-13C | | | SAC3T050 | INCH SCREW 3.4X5 + |
| | L-13D | | | SAC3T050 | INCH SCREW 3.4X5 + |
| | L-15A | | | 1VM422864 | HDD SCREW E4350JD |
| | L-15B | | | 1VM422864 | HDD SCREW E4350JD |
| | L-15C | | | 1VM422864 | HDD SCREW E4350JD |
| | L-15D | | | 1VM422864 | HDD SCREW E4350JD |
| | L-16A | | | GBHP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ BLK |
| | L-16B | | | GBHP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ BLK |
| | W5 | | P000472910 | WX1E4370-101 | FFC ATA-MAIN 40P(THIN PLATING) 40PIN/ TL265MM |
| **ACCESSORIES** | | | | | |
| | X-1 | A,C | P000473000 | NB316ED | REMOTE CONTROL UNIT NB316ED |
| | X-1 | B | P000472790 | NB315BD | REMOTE CONTROL UNIT NB315BD |
| ⚠ | X-2 | B | P000472690 | 1VMN23138 | OWNERS MANUAL(EN) E439BBD |
| ⚠ | X-2A | A | P000472920 | 1VMN23125 | OWNERS MANUAL(EN) E439AED |
| ⚠ | X-2A | C | P000473020 | 1VMN23140 | OWNERS MANUAL(FR) E439CFD |
| ⚠ | X-2B | A | P000472930 | 1VMN23126 | OWNERS MANUAL(DE) E439AED |
| ⚠ | X-2B | C | P000473030 | 1VMN23141 | OWNERS MANUAL(ES) E439CFD |
| ⚠ | X-2C | A | P000472940 | 1VMN23127 | OWNERS MANUAL(NL) E439AED |
| ⚠ | X-2D | A | P000472950 | 1VMN23128 | OWNERS MANUAL(TU) E439AED |
| | X-3 | A | P000472960 | 1VMN23129 | QUICK GUIDE E439AED |
| | X-3 | B | P000472700 | 1VMN23139 | QUICK GUIDE E439BBD |
| | X-3 | C | P000473040 | 1VMN23142 | QUICK GUIDE E439CFD |
| | X-6 | | P000460030 | WPZ0122LG001 | RF CORD PAL 1.2M |
| | X-7 | | | 0VM411198 | BAG REMOCON N9430UD(90*250) |
| | X-29 | B | | 1VM424769 | HELP LINE SHEET E9BA1BD |
| | X-30 | B | | 1VMN22863 | REGISTE RATION CARD E7B71BD |

# ELECTRICAL PARTS LIST

**PRODUCT SAFETY NOTE:** Products marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, read carefully the product safety notice in this service manual. Don't degrade the safety of the product through improper servicing.

**NOTES:**

1. Parts that are not assigned part numbers (---------) are not available.
2. Tolerance of Capacitors and Resistors are noted with the following symbols.

C.....±0.25% D.....±0.5% F.....±1%

G.....±2% J.....±5% K.....±10%

M.....±20% N.....±30% Z.....+80/-20%

**Comparison Chart of Models and Marks**

| Model | Mark |
|---|---|
| RD-XV45KE | A |
| RD-XV45KB | B |
| RD-XV45KF | C |

## DVD MECHANISM & DVD MAIN BOARD ASSEMBLY

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| ⚠ | P2 | A | P000472990 | N7REWBEN | DVD MECHANISM & DVD MAIN BOARD ASSEMBLY |
| ⚠ | P2 | B | P000472780 | N7REXBBN | DVD MECHANISM & DVD MAIN BOARD ASSEMBLY |
| ⚠ | P2 | C | P000473070 | N7REYBFN | DVD MECHANISM & DVD MAIN BOARD ASSEMBLY |

## POWER ASSEMBLY

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| ⚠<br>⚠<br>⚠ | P1<br>P1<br>P1 | A<br>B<br>C | P000472980<br>P000472750<br>P000473060 | 1VSA14959<br>1VSA14938<br>1VSA14934 | POWER ASSEMBLY<br>POWER ASSEMBLY<br>POWER ASSEMBLY<br>Consists of the following: |
| | | | | ------- | BOARD POWER (AV PCB A) |
| | | | | ------- | BOARD POWER SWITCH (AV PCB B) |
| | P4 | | | 1VSA13519 | BOARD SENSOR |

## BOARD POWER

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | | | | ------- | BOARD POWER (AV PCB A) Consists of the following: |
| | | | **CAPACITORS** | | |
| | C251 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C252 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C253 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C254 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C301 | | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C302 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C303 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C305 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C306 | | | CHD1JK30B473 | CHIP CERAMIC CAP.(1608) B K 0.047µF/ 50V |
| | C307 | | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C308 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C311 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C312 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C313 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C314 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C315 | | | CHD1JK30B473 | CHIP CERAMIC CAP.(1608) B K 0.047µF/ 50V |
| | C316 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C317 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C318 | A | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C324 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C325 | | | CHD1JK30B822 | CHIP CERAMIC CAP. B K 8200pF/50V |
| | C326 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C328 | | | CE0KMAVSL470 | ELECTROLYTIC CAP. 47µF/6.3V M H7 |
| | C329 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C331 | | | CE0KMAVSL221 | ELECTROLYTIC CAP. 220µF/6.3V M H7 |
| | C332 | | | CE1CMAVSL101 | ELECTROLYTIC CAP. 100µF/16V M H7 |
| | C333 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C334 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C335 | | | CE0KMAVSL101 | ELECTROLYTIC CAP. 100µF/6.3V H7 |
| | C336 | | | CHD1JJ3CH221 | CHIP CERAMIC CAP. CH J 220pF/50V |
| | C337 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C339 | | | CHD1JJ3CH121 | CHIP CERAMIC CAP. CH J 120pF/50V |
| | C340 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M H7 |
| | C341 | | | CHD1JD3CH100 | CHIP CERAMIC CAP.(1608) CH D 10pF/ 50V |
| | C342 | | | CHD1JJ3CH102 | CHIP CERAMIC CAP.(1608) CH J 1000pF/ 50V |
| | C343 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C344 | | | CP1EMAVSB4R7 | ELECTROLYTIC CAP. 4.7µF/25V M NP H7 |
| | C345 | | | CE1JMAVSLR47 | ELECTROLYTIC CAP. 0.47µF/50V M H7 |
| | C346 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C347 | | | CHD1EK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/25V |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C349 | | | CE1JMAVSLR47 | ELECTROLYTIC CAP. 0.47µF/50V M H7 |
| | C350 | | | CCA1JZTFZ104 | CERAMIC CAP.(AX) F Z 0.1µF/50V |
| | C370 | C | | CCA1CMT0Y103 | CERAMIC CAP.(AX) Y M 0.01µF/16V |
| | C371 | C | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C372 | C | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C373 | C | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C374 | C | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C375 | C | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C376 | C | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C377 | C | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C378 | C | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C379 | C | | CE1JMAVSLR47 | ELECTROLYTIC CAP. 0.47µF/50V M H7 |
| | C381 | C | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C382 | C | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C383 | C | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C384 | C | | CE1JMAVSL2R2 | ELECTROLYTIC CAP. 2.2µF/50V M H7 |
| | C402 | | | CMA1JJP00183 | FILM CAP.(P) 0.018µF/50V J |
| | C403 | | | CCD2AKS0B471 | CERAMIC CAP. B K 470pF/100V |
| | C404 | | | CE0KMAVSL221 | ELECTROLYTIC CAP. 220µF/6.3V M H7 |
| | C405 | | | CE0KMAVSL470 | ELECTROLYTIC CAP. 47µF/6.3V M H7 |
| | C407 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C408 | | | CHD1JK30B182 | CHIP CERAMIC CAP. B K 1800pF/50V |
| | C409 | | | CHD1JJ3CH330 | CHIP CERAMIC CAP.(1608) CH J 33pF/50V |
| | C410 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C411 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C412 | | | CE0KMAVSL330 | ELECTROLYTIC CAP. 33µF/6.3V M H7 |
| | C413 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C414 | | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C415 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C416 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C417 | | | CE0KMAVSL220 | ELECTROLYTIC CAP. 22µF/6.3V M H7 |
| | C418 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C419 | | | CHD1JJ3CH221 | CHIP CERAMIC CAP. CH J 220pF/50V |
| | C421 | | | CE0KMAVSL470 | ELECTROLYTIC CAP. 47µF/6.3V M H7 |
| | C452 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C453 | | | CE1AMAVSL220 | ELECTROLYTIC CAP. 22µF/10V M H7 |
| | C454 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C455 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C456 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C457 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C458 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C461 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C462 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C463 | | | CE1AMAVSL220 | ELECTROLYTIC CAP. 22µF/10V M H7 |
| | C464 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C465 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C466 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C467 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C468 | | | CE0KMAVSL221 | ELECTROLYTIC CAP. 220µF/6.3V M H7 |
| | C469 | | | CE1AMAVSL220 | ELECTROLYTIC CAP. 22µF/10V M H7 |
| | C470 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C471 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C472 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C473 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C474 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C475 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C476 | | | CE0KMAVSL220 | ELECTROLYTIC CAP. 22µF/6.3V M H7 |
| | C478 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C479 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C480 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10µF/16V M |
| | C481 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C482 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C483 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C484 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C485 | | | CE1CMAVSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C486 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C487 | | | CE1CMAVSL470 | ELECTROLYTIC CAP. 47µF/16V M H7 |
| | C488 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C502 | | | CHD1JK30B223 | CHIP CERAMIC CAP.(1608) B K 0.022µF/ 50V |
| | C505 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C506 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M |
| | C507 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C508 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C509 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C510 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C511 | | | CHD1JJ3CH101 | CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V |
| | C512 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C514 | | | CHD1JK30B331 | CHIP CERAMIC CAP. B K 330pF/50V |
| | C515 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C516 | | | CE0KMAVSL220 | ELECTROLYTIC CAP. 22μF/6.3V M H7 |
| | C517 | | | CCA1EZTFZ223 | CERAMIC CAP.(AX) F Z 0.022μF/25V |
| | C518 | | | CE0KMAVSL220 | ELECTROLYTIC CAP. 22μF/6.3V M H7 |
| | C519 | | | CHD1JJ3CH561 | CHIP CERAMIC CAP. CH J 560pF/50V |
| | C521 | | | CE0KMAVSL220 | ELECTROLYTIC CAP. 22μF/6.3V M H7 |
| | C522 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C524 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C527 | | | CCA1JKT0B101 | CERAMIC CAP.(AX) B K 100pF/50V |
| | C531 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C533 | | | CHD1JK30B473 | CHIP CERAMIC CAP.(1608) B K 0.047μF/ 50V |
| | C534 | | | CE0KMAVSL470 | ELECTROLYTIC CAP. 47μF/6.3V M H7 |
| | C535 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C536 | A,C | | CHD1JJ3CH561 | CHIP CERAMIC CAP. CH J 560pF/50V |
| | C538 | | | CHD1JJ3CH181 | CHIP CERAMIC CAP. CH J 180pF/50V |
| | C539 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C540 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C541 | | | CHD1JJ3CH180 | CHIP CERAMIC CAP. CH J 18pF/50V |
| | C542 | | | CHD1JJ3CH180 | CHIP CERAMIC CAP. CH J 18pF/50V |
| | C545 | | | CHD1JJ3CH220 | CHIP CERAMIC CAP.(1608) CH J 22pF/50V |
| | C546 | | | CHD1JJ3CH220 | CHIP CERAMIC CAP.(1608) CH J 22pF/50V |
| | C547 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C548 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C549 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M H7 |
| | C550 | | | CE0KMAVSL101 | ELECTROLYTIC CAP. 100μF/6.3V H7 |
| | C553 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C554 | | | CE0KMAVSL101 | ELECTROLYTIC CAP. 100μF/6.3V H7 |
| | C555 | | | CHD1EK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1μF/25V |
| | C558 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C560 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C611 | | | CE1JMASSL220 | ELECTROLYTIC CAP. 22μF/50V M H7 |

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|---|---|---|---|---|---|
| | C612 | | | CHD1JK30B472 | CHIP CERAMIC CAP.(1608) B K 4700pF/ 50V |
| | C614 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C616 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1501 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | C1502 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100μF/6.3V M |
| | C1506 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47μF/16V M |
| | C1507 | | | CE1EMASDL221 | ELECTROLYTIC CAP. 220μF/25V M |
| | C1508 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1μF/50V |
| | C1509 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100μF/6.3V M |
| | C1510 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1511 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1512 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1514 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1515 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1517 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1519 | | | CE1CMASDL221 | ELECTROLYTIC CAP. 220μF/16V M |
| | C1520 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1521 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1522 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1525 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1526 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1527 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47μF/16V M |
| | C1528 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47μF/16V M |
| | C1530 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1532 | | | CHD1JJ3CH220 | CHIP CERAMIC CAP.(1608) CH J 22pF/50V |
| | C1533 | | | CHD1JJ3CH220 | CHIP CERAMIC CAP.(1608) CH J 22pF/50V |
| | C1536 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1537 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1539 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1540 | | | CE1CMASDL471 | ELECTROLYTIC CAP. 470μF/16V M |
| | C1541 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1542 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C1543 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1544 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1546 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1547 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1548 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| **If C1549A is 0.015μF, then IC1502A is R3112N191A-TR- FA.** | | | | | |
| | C1549A | | | CHD1JK30B153 | CHIP CERAMIC CAP.(1608) B K 0.015μF/ 50V |
| | IC1502A | | P000459990 | QSZBA0TRC021 | VOLTAGE DETECT R3112N191A-TR-FA |

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| **If C1549B is 0.1μF, then IC1502B is PST3619NR.** | | | | | |
| | C1549B | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1μF/50V |
| | IC1502B | | P000459980 | QSZBA0TMM151 | SYSTEM RESET IC PST3619NR |
| | C1550 | | | CE1EMASDL470 | ELECTROLYTIC CAP. 47μF/25V M |
| | C1551 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1552 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C1553 | | | CHD1JJ3CH101 | CHIP CERAMIC CAP.(1608) CH J 100pF/ 50V |
| | C1554 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1555 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100μF/6.3V M |
| | C1557 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1558 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1559 | | | CHD1JJ3CH271 | CHIP CERAMIC CAP.(1608) CH J 270pF/ 50V |
| | C1560 | | | CHD1JJ3CH470 | CHIP CERAMIC CAP.(1608) CH J 47pF/50V |
| | C1561 | | | CHD1JJ3CH271 | CHIP CERAMIC CAP.(1608) CH J 270pF/ 50V |
| | C1562 | | | CHD1JJ3CH470 | CHIP CERAMIC CAP.(1608) CH J 47pF/50V |
| | C1563 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1564 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1565 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1566 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1567 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1568 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1569 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1570 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1571 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1572 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1573 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1574 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1575 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1576 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1577 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1578 | | | CE1JMASDLR47 | ELECTROLYTIC CAP. 0.47μF/50V M |
| | C1579 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1581 | | | CE1AMASDL470 | ELECTROLYTIC CAP. 47μF/10V M |
| | C1582 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1583 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1584 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1585 | | | CHD1JJ3CH680 | CHIP CERAMIC CAP.(1608) CH J 68pF/50V |
| | C1586 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1587 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C1588 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1589 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1590 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1591 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1592 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1593 | | | CE1EMASDL4R7 | ELECTROLYTIC CAP. 4.7μF/25V M |
| | C1594 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1595 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | C1596 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1597 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1598 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1599 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1600 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1601 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1602 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1603 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1604 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1605 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1606 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1607 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01μF/ 50V |
| | C1608 | | | CE1CMASDL100 | ELECTROLYTIC CAP. 10μF/16V M |
| | C1609 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1610 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1611 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1612 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1613 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1614 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1615 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1616 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1617 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1618 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1619 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1620 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1621 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1622 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1μF/ 50V M |
| | C1623 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1625 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C1628 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |
| | C1629 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47μF/6.3V M |
| | C1630 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1μF/50V |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C1631 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470µF/6.3V M |
| | C1632 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C1633 | | | CCA1JZTFZ104 | CERAMIC CAP.(AX) F Z 0.1µF/50V |
| | C1634 | | | CE1EMAVSL4R7 | ELECTROLYTIC CAP. 4.7µF/25V M H7 |
| | C1635 | | | CDA1EKP0X183 | SEMICONDUCTOR CAP. SR K 0.018µF/25V |
| | C1636 | | | CE1JMAVSL1R0 | ELECTROLYTIC CAP. 1µF/50V M H7 |
| | C1637 | | | CP1JMAVSB1R0 | ELECTROLYTIC CAP. 1µF/50V M H7 NP |
| | C1638 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/50V |
| | C1639 | | | CE0KMAVSL470 | ELECTROLYTIC CAP. 47µF/6.3V M H7 |
| | C1641 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/50V |
| | C1644 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1645 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1646 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1647 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1648 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C1649 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/50V |
| | C1650 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/50V M |
| | C1652 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/50V |
| | C1654 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C1656 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C1659 | | | CE0KMASDL470 | ELECTROLYTIC CAP. 47µF/6.3V M |
| | C1664 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1665 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C1666 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/50V |
| | C1667 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/50V M |
| | C1668 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/50V |
| | C1669 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C1673 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/50V M |
| | C1679 | | | CHD1JZ30F103 | CHIP CERAMIC CAP. F Z 0.01µF/50V |
| | C1680 | | | CE1JMASDL100 | ELECTROLYTIC CAP. 10µF/50V M |
| | C1681 | | | CE1JMASDLR33 | ELECTROLYTIC CAP. 0.33µF/50V M |
| | C1690 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | C1691 | | | CE1CMASDL101 | ELECTROLYTIC CAP. 100µF/16V M |
| | C1692 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47µF/16V M |
| | C1693 | | | CHD1JJ3CH680 | CHIP CERAMIC CAP.(1608) CH J 68pF/50V |
| | C1694 | | | CHD1JJ3CH680 | CHIP CERAMIC CAP.(1608) CH J 68pF/50V |
| **CONNECTORS** | | | | | |
| | CN1501 | | | JCFNG30JG020 | FMN CONNECTOR TOP 30P 30FMN-BTRK-A(LF)(SN) |
| | CN1503 | | | JCFNG20JG022 | FMN CONNECTOR SIDE 20P 20FMN-STRK-A(LF)(SN) |
| | CN1504 | | | JCFNG30JG020 | FMN CONNECTOR TOP 30P 30FMN-BTRK-A(LF)(SN) |
| | CN1508 | A,B | | E9771AFV | AFV BOARD ASSEMBLY E9771AFV |
| | CN1508 | C | | E9772AFV | AFV BOARD ASSEMBLY E9772AFV |
| **DIODES** | | | | | |
| | D301 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D370 | C | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D510 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D520 | | | NPQZ0012541T | LED(RED) 1254IT |
| | D555 | | P000492990 | QPQPS1R563ST | LED SIR-563ST3F P |
| | D1501 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1502 | | | JW7.5T | BOARD JUMPER D0.6-P7.5 |
| | D1503 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1504 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1505 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1507 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1508 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1509 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1510 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1511 | | | QDTC0MTZJ5R6 | ZENER DIODE MTZJT-775.6C |
| | D1512 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1513 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1514 | | | QDTB00MTZJ10 | ZENER DIODE MTZJT-7710B |
| | D1516 | | | QDTB00MTZJ18 | ZENER DIODE MTZJT-7718B |
| | D1517 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1518 | | | QDTB00MTZJ10 | ZENER DIODE MTZJT-7710B |
| | D1519 | | | QDTB0MTZJ5R6 | ZENER DIODE MTZJT-775.6B |
| | D1522 | | | QDTC0MTZJ5R6 | ZENER DIODE MTZJT-775.6C |
| | D1523 | | | QDTA0MTZJ7R5 | ZENER DIODE MTZJT-777.5A |
| | D1524 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1525 | | | QDTB0MTZJ3R0 | ZENER DIODE MTZJT-773.0B |
| | D1526 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1527 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1528 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1529 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1530 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1531 | | | QDTB00MTZJ33 | ZENER DIODE MTZJT-7733B |
| | D1532 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1533 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1534 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1535 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | D1536 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1539 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1540 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1541 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1542 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1543 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1544 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1545 | | P000468260 | NDQZ001N4005 | RECTIFIER DIODE 1N4005 |
| | D1546 | | | NDQZ000SB140 | SCHOTTKY BARRIER DIODE SB140 |
| | D1550 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1551 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1552 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1553 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1554 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1555 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D1556 | | | NDQZ000SB140 | SCHOTTKY BARRIER DIODE SB140 |
| | D1557 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1606 | | | QDTA0MTZJ8R2 | ZENER DIODE MTZJT-778.2A |
| | | | **ICS** | | |
| | IC301 | | P000465590 | QSZBA0RSY020 | IC Y/C/A LA71750EM-MPB-E |
| | IC370 | C | P000465860 | QSZBA0TSY019 | IC SECAM LA70100M-TRM-E |
| | IC451 | | P000465600 | QSZBA0RSY033 | IC HIFI LA72648M-MPB-E |
| | IC501 | | | QSZAC0RHT101 | SYSCON IC M3776AMCH-AE9GP |
| | IC612 | | P000457190 | NSZBA0TG2007 | VFD DRIVER/ CONTROLLER IC PT6313-S-TP(L) |
| | IC1501 | | P000468640 | NSZBA0S2H003 | IC OP AMP UTC4580 DIP-8 8PIN |
| **If IC1502A is R3112N191A-TR-FA, then C1549A is 0.015μF.** | | | | | |
| | IC1502A | | P000459990 | QSZBA0TRC021 | VOLTAGE DETECT R3112N191A-TR-FA |
| | C1549A | | | CHD1JK30B153 | CHIP CERAMIC CAP.(1608) B K 0.015μF/ 50V |
| **If IC1502B is PST3619NR, then C1549B is 0.1μF.** | | | | | |
| | IC1502B | | P000459980 | QSZBA0TMM151 | SYSTEM RESET IC PST3619NR |
| | C1549B | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1μF/50V |
| | IC1503 | | P000459940 | NSZBA0TJY036 | IC SHUNT REGULATOR KIA431-AT/P |
| | IC1504 | | | QSZAB0RMS052 | MICROCONTROLLER 8BIT MN101C77A FL1 |
| | IC1505 | | P000459910 | NSZBA0SJY035 | IC OP AMP KIA4558P/P |
| | IC1506 | | P000459970 | QSZBA0RHT051 | IC INTERFACE HA118326APF-E |
| | IC1507 | | P000460000 | QSZBA0TSY018 | IC VPS/PDC SLICER LC74793JM-TLM-E |
| | | | **COILS** | | |
| | L251 | | | LLAXKATTU5R6 | INDUCTOR 5.6μH-K-26T |
| | L302 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L370 | C | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L402 | | | LLARKBSTU470 | INDUCTOR 47μH-K-5FT |
| | L451 | | | LLARKBSTU470 | INDUCTOR 47μH-K-5FT |
| | L452 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | L501 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L502 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L503 | | | LLAXKATTU1R8 | INDUCTOR 1.8μH-K-26T |
| | L1501 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L1503 | | | LLBD00PKV022 | CHOKE COIL 47μH |
| | L1504 | | | LLBD00PKV022 | CHOKE COIL 47μH |
| | L1505 | | | LLARKBSTU101 | INDUCTOR 100μH-K-5FT |
| | L1506 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L1507 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L1508 | | | LLBD00PKV022 | CHOKE COIL 47μH |
| | L1509 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L1510 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L1511 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L1513 | | | LLAXKATTU101 | INDUCTOR(100μH K) LAP02TA101K |
| | L1514 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L1516 | | | LLAXKATTUR47 | INDUCTOR(0.47μH K) LAP02TAR47K |
| | L1601 | | | ———— | BEAD CORE ASSEMBLY E9770ED |
| | L1601-1 | | | JW20.0T | BOARD JUMPER D0.6-P20.0 |
| | L1601-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| | | | **TRANSISTORS** | | |
| | Q302 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q401 | | | QQ2Z0RN1511F | CHIP TRANSISTOR RN1511(TE85R.F) |
| | Q402 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q403 | | | NQSYKTC3203P | TRANSISTOR KTC3203-Y-AT/P |
| | Q404 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q405 | | | NQSZ0KRA103M | RES. BUILT-IN TRANSISTOR KRA103M-AT/P |
| | Q406 | | | NQ1YKTC3875S | CHIP TRANSISTOR KTC3875S-Y-RTK/P |
| | Q451 | | | NQ1ZKRC103SP | TRANSISTOR KRC103S-RTK/P |
| | Q506 | | | NPWZT2046B12 | PHOTO TRANSISTOR PT204-6B-12 |
| | Q514 | | | NQSYKTA1267P | TRANSISTOR KTA1267-Y-AT/P |
| | Q515 | | | NQSZKRC106MP | NPN TRANSISTOR KRC106M-AT/P |
| | Q516 | | | NQ14KTC3875S | CHIP TRANSISTOR KTC3875S-GR-RTK/P |
| | Q517 | | | NQ14KTC3875S | CHIP TRANSISTOR KTC3875S-GR-RTK/P |
| | Q518 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q520 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1501 | | | NQVYKTA1281P | TRANSISTOR KTA1281Y-AT/P |
| | Q1502 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1504 | | | NQSYKTC3205P | TRANSISTOR KTC3205-Y-AT/P |
| | Q1509 | | | NQSZ0KRA104M | RES. BUILT-IN TRANSISTOR KRA104M-AT/P |
| | Q1510 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1511 | | | NQSYKTC3198P | TRANSISTOR KTC3198-Y-AT/P |
| | Q1512 | | | NQSYKTC3193P | TRANSISTOR KTC3193-Y-AT/P |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | Q1514 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1515 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1516 | | | NQSYKTC3203P | TRANSISTOR KTC3203-Y-AT/P |
| | Q1517 | | | NQSYKTC3203P | TRANSISTOR KTC3203-Y-AT/P |
| | Q1518 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1519 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1520 | | | NQSYKTC3203P | TRANSISTOR KTC3203-Y-AT/P |
| | Q1524 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1525 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1526 | | | NQS5KTC3199P | TRANSISTOR KTC3199-BL-AT/P |
| | Q1527 | | | NQSYKTA1267P | TRANSISTOR KTA1267-Y-AT/P |
| | Q1528 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1529 | | | QF1GSSM3K15F | MOS FET SSM3K15F(TE85L F) |
| | Q1530 | | | QF1GSSM3K15F | MOS FET SSM3K15F(TE85L F) |
| | Q1531 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1532 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1533 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1534 | | | NQSYKTA1267P | TRANSISTOR KTA1267-Y-AT/P |
| | Q1535 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1536 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q1537 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1538 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1539 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1540 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1601 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q1602 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1603 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1604 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1605 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1606 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | **RESISTORS** | | | | |
| | R251 | | | RRXAJR5Z0393 | CHIP RES. 1/10W J 39k Ω |
| | R252 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R301 | | | RRXAJR5Z0122 | CHIP RES. 1/10W J 1.2k Ω |
| | R303 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R305 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R308 | A | | RRXAJR5Z0392 | CHIP RES. 1/10W J 3.9k Ω |
| | R312 | A | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R314 | | | RRXAJR5Z0392 | CHIP RES. 1/10W J 3.9k Ω |
| | R316 | | | RRXAJR5Z0182 | CHIP RES. 1/10W J 1.8k Ω |
| | R319 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R320 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R321 | | | RRXAJR5Z0151 | CHIP RES. 1/10W J 150 Ω |
| | R322 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R323 | | | RRXAJR5Z0151 | CHIP RES. 1/10W J 150 Ω |
| | R325 | | | RRXAJR5Z0122 | CHIP RES. 1/10W J 1.2k Ω |
| | R326 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R327 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R328 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R329 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R330 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R331 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R332 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R333 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R334 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R335 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R336 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R337 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R338 | | | RRXAJR5Z0681 | CHIP RES. 1/10W J 680 Ω |
| | R370 | C | | RRXAJR5Z0272 | CHIP RES. 1/10W J 2.7k Ω |
| | R371 | C | | RCX6JATZ0562 | CARBON RES. 1/6W J 5.6k Ω |
| | R372 | C | | RRXAJR5Z0392 | CHIP RES. 1/10W J 3.9k Ω |
| | R401 | | | RCX4JATZ0821 | CARBON RES. 1/4W J 820 Ω |
| | R402 | | | RCX6JATZ0101 | CARBON RES. 1/6W J 100 Ω |
| | R404 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R405 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R406 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R407 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R408 | | | RRXAJR5Z0123 | CHIP RES. 1/10W J 12k Ω |
| | R409 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R410 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R411 | | | RRXAJR5Z0273 | CHIP RES. 1/10W J 27k Ω |
| | R412 | | | RRXAJR5Z0121 | CHIP RES. 1/10W J 120 Ω |
| | R413 | | | RRXAJR5Z0334 | CHIP RES. 1/10W J 330k Ω |
| | R414 | | | RRXAJR5Z0123 | CHIP RES. 1/10W J 12k Ω |
| | R415 | | | RRXAJR5Z0182 | CHIP RES. 1/10W J 1.8k Ω |
| | R416 | | | RRXAJR5Z0561 | CHIP RES. 1/10W J 560 Ω |
| | R417 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R418 | | | RRXAJR5Z0123 | CHIP RES. 1/10W J 12k Ω |
| | R419 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R420 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R421 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R451 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R452 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R462 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R463 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R464 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R465 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R466 | | | RRXAJR5Z0822 | CHIP RES. 1/10W J 8.2k Ω |
| | R469 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R470 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R479 | | | RRXAJR5Z0330 | CHIP RES. 1/10W J 33 Ω |
| | R480 | | | RCX6JATZ0101 | CARBON RES. 1/6W J 100 Ω |
| | R481 | | | RRXAJR5Z0330 | CHIP RES. 1/10W J 33 Ω |
| | R482 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R483 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R484 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R509 | | | RRXAJR5Z0181 | CHIP RES. 1/10W J 180 Ω |
| | R511 | | | RCX6GATZ0362 | CARBON RES. 1/6W G 3.6k Ω |
| | R512 | | | RRXAJR5Z0683 | CHIP RES. 1/10W J 68k Ω |
| | R513 | | | RRXAJR5Z0333 | CHIP RES. 1/10W J 33k Ω |
| | R514 | | | RCX6GATZ0103 | CARBON RES. 1/6W G 10k Ω |
| | R516 | | | RCX6GATZ0471 | CARBON RES. 1/6W G 470 Ω |
| | R517 | | | RCX4JATZ0271 | CARBON RES. 1/4W J 270 Ω |
| | R519 | | | RCX6GATZ0223 | CARBON RES. 1/6W G 22k Ω |
| | R523 | | | RCX6GATZ0152 | CARBON RES. 1/6W G 1.5k Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R525 | | | RRXAJR5Z0394 | CHIP RES. 1/10W J 390k Ω |
| | R526 | | | RCX6JATZ0394 | CARBON RES. 1/6W J 390k Ω |
| | R528 | | | RCX6GATZ0472 | CARBON RES. 1/6W G 4.7k Ω |
| | R536 | | | RRXAJR5Z0182 | CHIP RES. 1/10W J 1.8k Ω |
| | R537 | | | RRXAJR5Z0681 | CHIP RES. 1/10W J 680 Ω |
| | R539 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R540 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R541 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R542 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R543 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R544 | | | RCX6JATZ0103 | CARBON RES. 1/6W J 10k Ω |
| | R545 | | | RCX6JATZ0103 | CARBON RES. 1/6W J 10k Ω |
| | R546 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R547 | A,C | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R548 | B | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R549 | C | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R550 | A,B | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R553 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R555 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R560 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R567 | | | RRXAJR5Z0393 | CHIP RES. 1/10W J 39k Ω |
| | R568 | | | RRXAJR5Z0224 | CHIP RES. 1/10W J 220k Ω |
| | R569 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R570 | | | RCX6JATZ0472 | CARBON RES. 1/6W J 4.7k Ω |
| | R572 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R574 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R575 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R576 | A,B | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R577 | | | RRXAJR5Z0152 | CHIP RES. 1/10W J 1.5k Ω |
| | R578 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R582 | | | RRXAJR5Z0104 | CHIP RES. 1/10W J 100k Ω |
| | R585 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R586 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R588 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R590 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R592 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R595 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R601 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R617 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R618 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R621 | | | RRXAJR5Z0683 | CHIP RES. 1/10W J 68k Ω |
| | R622 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R623 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R624 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R625 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R626 | | | RRXAJR5Z0182 | CHIP RES. 1/10W J 1.8k Ω |
| | R627 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R628 | | | RRXAJR5Z0122 | CHIP RES. 1/10W J 1.2k Ω |
| | R629 | | | RRXAJR5Z0152 | CHIP RES. 1/10W J 1.5k Ω |
| | R630 | | | RRXAJR5Z0392 | CHIP RES. 1/10W J 3.9k Ω |
| | R631 | | | RCX4JATZ0151 | CARBON RES. 1/4W J 150 Ω |
| | R643 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R644 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R645 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R646 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R647 | | | RRXAJR5Z0561 | CHIP RES. 1/10W J 560 Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R648 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R649 | | | RRXAJR5Z0561 | CHIP RES. 1/10W J 560 Ω |
| | R650 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R653 | | | RCX4JATZ0272 | CARBON RES. 1/4W J 2.7k Ω |
| | R654 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R655 | | | RRXAJR5Z0561 | CHIP RES. 1/10W J 560 Ω |
| | R656 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R660 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R661 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R662 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R663 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R664 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R665 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R667 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R668 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R1502 | | | RCX6JATZ0473 | CARBON RES. 1/6W J 47k Ω |
| | R1503 | | | RCX4JATZ0681 | CARBON RES. 1/4W J 680 Ω |
| | R1504 | | | RCX4JATZ0681 | CARBON RES. 1/4W J 680 Ω |
| | R1509 | | | RRXAFR5H2000 | CHIP RES. 1/10W F 200 Ω |
| | R1510 | | | RRXAFR5H2000 | CHIP RES. 1/10W F 200 Ω |
| | R1511 | | | RRXAFR5H2000 | CHIP RES. 1/10W F 200 Ω |
| | R1512 | | | RRXAFR5H2000 | CHIP RES. 1/10W F 200 Ω |
| | R1513 | | | RRXAFR5H2000 | CHIP RES. 1/10W F 200 Ω |
| | R1515 | | | RCX6JATZ0223 | CARBON RES. 1/6W J 22k Ω |
| | R1516 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R1517 | | | RRXAJR5Z0270 | CHIP RES. 1/10W J 27 Ω |
| | R1522 | | | RCX4JATZ0471 | CARBON RES. 1/4W J 470 Ω |
| | R1523 | | | RRXAJR5Z0821 | CHIP RES. 1/10W J 820 Ω |
| | R1524 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1525 | | | RRXAJR5Z0392 | CHIP RES. 1/10W J 3.9k Ω |
| | R1526 | | | RCX4JATZ0272 | CARBON RES. 1/4W J 2.7k Ω |
| | R1527 | | | RCX4JATZ0272 | CARBON RES. 1/4W J 2.7k Ω |
| | R1528 | | | RCX4JATZ0272 | CARBON RES. 1/4W J 2.7k Ω |
| | R1529 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1530 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1531 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1532 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1533 | | | RRXAJR5Z0152 | CHIP RES. 1/10W J 1.5k Ω |
| | R1534 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1538 | | | CHD1JJ3CH330 | CHIP CERAMIC CAP.(1608) CH J 33pF/50V |
| | R1541 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R1542 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1543 | | | RRXAJR5Z0124 | CHIP RES. 1/10W J 120k Ω |
| | R1544 | | | RRXAJR5Z0393 | CHIP RES. 1/10W J 39k Ω |
| | R1545 | | | RCX4JATZ0682 | CARBON RES. 1/4W J 6.8k Ω |
| | R1546 | | | RCX4JATZ0682 | CARBON RES. 1/4W J 6.8k Ω |
| | R1547 | | | RCX4JATZ0821 | CARBON RES. 1/4W J 820 Ω |
| | R1548 | | | RCX6JATZ0152 | CARBON RES. 1/6W J 1.5k Ω |
| | R1549 | | | RCX4JATZ0151 | CARBON RES. 1/4W J 150 Ω |
| | R1550 | | | RCX4JATZ0331 | CARBON RES. 1/4W J 330 Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R1551 | | | RCX4JATZ0391 | CARBON RES. 1/4W J 390 Ω |
| | R1552 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1553 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1554 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1557 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R1558 | | | RRXAJR5Z0393 | CHIP RES. 1/10W J 39k Ω |
| | R1559 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1560 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1561 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1562 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1563 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1564 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1565 | | | RRXAJR5Z0124 | CHIP RES. 1/10W J 120k Ω |
| | R1566 | | | RRXAJR5Z0393 | CHIP RES. 1/10W J 39k Ω |
| | R1567 | | | RCX4JATZ0682 | CARBON RES. 1/4W J 6.8k Ω |
| | R1568 | | | RRXAJR5Z0683 | CHIP RES. 1/10W J 68k Ω |
| | R1569 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R1570 | | | RRXAJR5Z0683 | CHIP RES. 1/10W J 68k Ω |
| | R1572 | | | RRXAFR5H1000 | CHIP RES. 1/10W F 100 Ω |
| | R1573 | | | RRXAFR5H1501 | CHIP RES. 1/10W F 1.5k Ω |
| | R1574 | | | RCX4JATZ0561 | CARBON RES. 1/4W J 560 Ω |
| | R1575 | | | RRXAFR5H4701 | CHIP RES. 1/10W F 4.7k Ω |
| | R1576 | | | RRXAJR5Z0332 | CHIP RES. 1/10W J 3.3k Ω |
| | R1578 | | | RRXAJR5Z0823 | CHIP RES. 1/10W J 82k Ω |
| | R1579 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1580 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1581 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1582 | | | RCX4JATZ0181 | CARBON RES. 1/4W J 180 Ω |
| | R1584 | | | RCX4JATZ0181 | CARBON RES. 1/4W J 180 Ω |
| | R1586 | | | RCX4JATZ0100 | CARBON RES. 1/4W J 10 Ω |
| | R1587 | | | RCX4JATZ0120 | CARBON RES. 1/4W J 12 Ω |
| | R1593 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1594 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1595 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1596 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1597 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1598 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1599 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1601 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1602 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1603 | C | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1604 | C | | RRXAJR5Z0821 | CHIP RES. 1/10W J 820 Ω |
| | R1605 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1606 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1607 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R1608 | | | RRXAJR5Z0333 | CHIP RES. 1/10W J 33k Ω |
| | R1609 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1610 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1611 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1612 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1613 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R1614 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1615 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1616 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R1617 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1618 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R1619 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1620 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1621 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1622 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1623 | | | RCX4JATZ0821 | CARBON RES. 1/4W J 820 Ω |
| | R1624 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1625 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1626 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1627 | | | RRXAJR5Z0151 | CHIP RES. 1/10W J 150 Ω |
| | R1628 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R1629 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1630 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1631 | | | RRXAFR5H8201 | CHIP RES. 1/10W F 8.2k Ω |
| | R1632 | | | RRXAFR5H1302 | CHIP RES. 1/10W F 13k Ω |
| | R1633 | | | RRXAJR5Z0133 | CHIP RES. 1/10W J 13k Ω |
| | R1634 | | | RRXAFR5H8201 | CHIP RES. 1/10W F 8.2k Ω |
| | R1635 | | | RRXAFR5H1302 | CHIP RES. 1/10W F 13k Ω |
| | R1636 | | | RRXAJR5Z0133 | CHIP RES. 1/10W J 13k Ω |
| | R1637 | | | RCX4JATZ0681 | CARBON RES. 1/4W J 680 Ω |
| | R1638 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1639 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1640 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1641 | | | RRXAJR5Z0104 | CHIP RES. 1/10W J 100k Ω |
| | R1642 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1643 | | | RRXAJR5Z0104 | CHIP RES. 1/10W J 100k Ω |
| | R1644 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1645 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1646 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1647 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1648 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1649 | | | RRXAJR5Z0272 | CHIP RES. 1/10W J 2.7k Ω |
| | R1650 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1651 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1652 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1653 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R1654 | | | RRXAJR5Z0101 | CHIP RES. 1/10W J 100 Ω |
| | R1655 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R1656 | | | RCX6JATZ0332 | CARBON RES. 1/6W J 3.3k Ω |
| | R1657 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1658 | | | RRXAJR5Z0182 | CHIP RES. 1/10W J 1.8k Ω |
| | R1659 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R1660 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R1661 | | | RRXAJR5Z0223 | CHIP RES. 1/10W J 22k Ω |
| | R1663 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1664 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1665 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R1666 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1667 | | | RRXAJR5Z0303 | CHIP RES. 1/10W J 30k Ω |
| | R1668 | | | RCX4JATZ0182 | CARBON RES. 1/4W J 1.8k Ω |
| | R1669 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1670 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1671 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R1672 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R1674 | | | RRXAJR5Z0104 | CHIP RES. 1/10W J 100k Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R1675 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1676 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1677 | | | RCX4JATZ0471 | CARBON RES. 1/4W J 470 Ω |
| | R1678 | | | RCX4JATZ0471 | CARBON RES. 1/4W J 470 Ω |
| | R1679 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1680 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1681 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R1682 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1683 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1684 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1685 | | | RCX6JATZ0101 | CARBON RES. 1/6W J 100 Ω |
| | R1686 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1687 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R1691 | | | RRXAJR5Z0331 | CHIP RES. 1/10W J 330 Ω |
| | R1692 | | | RRXAJR5Z0331 | CHIP RES. 1/10W J 330 Ω |
| | R1693 | A,B | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1694 | | | RRXAJR5Z0331 | CHIP RES. 1/10W J 330 Ω |
| | R1695 | | | RRXAJR5Z0331 | CHIP RES. 1/10W J 330 Ω |
| | R1696 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R1697 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R1699 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1700 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1701 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1702 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1703 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1704 | | | RRXAJR5Z0105 | CHIP RES. 1/10W J 1M Ω |
| | R1705 | | | RRXAJR5Z0105 | CHIP RES. 1/10W J 1M Ω |
| | R1706 | | | RRXAJR5Z0105 | CHIP RES. 1/10W J 1M Ω |
| | R1707 | | | RRXAJR5Z0105 | CHIP RES. 1/10W J 1M Ω |
| | R1708 | | | RCX4JATZ0620 | CARBON RES. 1/4W J 62 Ω |
| | R1709 | | | RRXAJR5Z0100 | CHIP RES. 1/10W J 10 Ω |
| | R1710 | | | RRXAJR5Z0100 | CHIP RES. 1/10W J 10 Ω |
| | R1711 | | | RRXAJR5Z0330 | CHIP RES. 1/10W J 33 Ω |
| | R1712 | | | RRXAJR5Z0104 | CHIP RES. 1/10W J 100k Ω |
| | R1714 | | | RCX4JATZ0182 | CARBON RES. 1/4W J 1.8k Ω |
| | R1716 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1721 | | | RRXAJR5Z0474 | CHIP RES. 1/10W J 470k Ω |
| | R1722 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1723 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1724 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R1725 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R1726 | | | RCX6JATZ0123 | CARBON RES. 1/6W J 12k Ω |
| | R1727 | | | RRXAJR5Z0123 | CHIP RES. 1/10W J 12k Ω |
| | R1728 | | | RRXAJR5Z0151 | CHIP RES. 1/10W J 150 Ω |
| | R1730 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1731 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1732 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1734 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1735 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1736 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1737 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1738 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1741 | | | CHD1JJ3CH680 | CHIP CERAMIC CAP.(1608) CH J 68pF/50V |
| | R1742 | A,B | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R1742 | C | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | **SWITCHES** | | | | |
| | SW506 | | P000465640 | SSC0101MCE03 | LEAF SWITCH MXS01830MVP0 |
| | SW507 | | P000465650 | SSR0106KB003 | ROTARY MODE SWITCH SSS-53MD |
| | SW521 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW522 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW523 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW524 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW525 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW1501 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW1502 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | **MISCELLANEOUS** | | | | |
| | B-9H | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-9I | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-10 | | | 1VM420438A | NEW SHIELD ASSEMBLY H9700ED |
| | B-16 | | | 0VM412870 | DOUBLE SIDE TAPE HB200UD |
| | B-31 | | | 0VM304573 | ROHM HOLDER H7770JD |
| | FL601 | | P000472820 | TVFD1C0FT050 | VFD 7-BT-306NS |
| | JK1502 | | P000465520 | JXRL010LY140 | JACK RCA MSP-281V41-B(B110) |
| | JK1503 | | P000465530 | JXRL020LY120 | JACK RCA MSP-382V-12 NILF |
| | JK1504 | | P000459850 | JXGL210LY008 | RGB CONNECTOR MRC-021V-05 ABS(B110 |
| | JK1505 | | P000457070 | JXEL040LY003 | JACK S TYPE MDC-050V-2.4 LF(B110 |
| | L-2A | | | GBCP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-2B | | | GBCP3080 | SCREW P-TIGHT M3X8 BIND HEAD+ |
| | L-9P | | | GBJS3060 | SCREW S-TIGHT M3X6 BIND HEAD+ |
| | PS502 | | | QPWZP1302C70 | PHOTO INTERRUPTER RPI-302C70 |
| | RM1501 | | P000457340 | USESJRSKK039 | REMOTE RECEIVER PIC-37043LU |
| | TP1521 | | | JW7.0T | BOARD JUMPER D0.6-P7.0 |
| | TP1522 | | | JW7.0T | BOARD JUMPER D0.6-P7.0 |
| | TP301 | | | JW24.5T | BOARD JUMPER D0.6-P24.5 |
| | TP501 | | | JW10.5T | BOARD JUMPER D0.6-P10.5 |
| | TP502 | | | JW7.0T | BOARD JUMPER D0.6-P7.0 |
| | TP503 | | | JW7.0T | BOARD JUMPER D0.6-P7.0 |
| | TP504 | | | JW7.0T | BOARD JUMPER D0.6-P7.0 |
| | TU1501 | A,B | P000460020 | UTUNPLGAL017 | TUNER UNIT TMFE2-301A |
| | TU1501 | C | P000461900 | UTUNPSLAL005 | TUNER UNIT TMFE2-401A |
| | VR501 | | | VRCB104HH014 | CARBON P.O.T. VZ067TL1 B104 PB(F) |
| | W1 | | P000472840 | WX1E4340-001 | FFC AV-MAIN 30P 30PIN/ TL350MM |
| | X301 | | P000468200 | FXC445LLN004 | XTAL 4.433619MHz |
| | X501 | | | FXD126LDS002 | XTAL 12MHz 12.000MHz |
| | X1501 | | P000483200 | FX0323LDS001 | XTAL DT38 32.768kHZ |
| | X1502 | | | FY0805PMR002 | CERAMIC RESONETOR CSTLS8M00G56-B0 |

## BOARD POWER SWITCH

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | | | | ––––– | BOARD POWER SWITCH (AV PCB B) Consists of the following: |
| | | | **DIODE** | | |
| | D1605 | | P000468280 | NPQZ1CHJGTN N | LED(GREEN) LTL1CHJGTNN |
| | | | **SWITCH** | | |
| | SW1601 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | | | **MISCELLANEOUS** | | |
| | W6 | | P000472880 | WX1E4340-006 | PARALLEL WIRE 4P AWG26#2651/ 126MM |

## BOARD SENSOR

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P4 | | P000472720 | 1VSA13519 | BOARD SENSOR Consists of the following: |
| | | | **TRANSISTORS** | | |
| | Q503 | | | NPWZT2046B12 | PHOTO TRANSISTOR PT204-6B-12 |
| | Q504 | | | NPWZT2046B12 | PHOTO TRANSISTOR PT204-6B-12 |

## BOARD PW/SW

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| ⚠<br>⚠ | P3<br>P3 | A,C<br>B | ––––––<br>––––––– | 1VSA14932<br>1VSA14930 | BOARD PW/SW<br>BOARD PW/SW Consists of the following: |
| ⚠ | P3-4 | A,C | P000483620 | 1VSA14932-4 | BOARD POWER SUPPLY (PW/SW-A) |
| ⚠ | P3-4 | B | P000483580 | 1VSA14930-4 | BOARD POWER SUPPLY (PW/SW-A) |
| | P3-2 | A,C | P000483600 | 1VSA14932-2 | BOARD FRONT JACK (PW/SW-B) |
| | P3-2 | B | P000483560 | 1VSA14930-2 | BOARD FRONT JACK (PW/SW-B) |
| | P3-1 | A,C | P000483590 | 1VSA14932-1 | BOARD SWITCH (PW/SW-C) |
| | P3-1 | B | P000483550 | 1VSA14930-1 | BOARD SWITCH (PW/SW-C) |
| | P3-3 | A,C | P000483610 | 1VSA14932-3 | BOARD REAR JACK (PW/SW-D) |
| | P3-3 | B | P000483570 | 1VSA14930-3 | BOARD REAR JACK (PW/SW-D) |

## BOARD POWER SUPPLY

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| ⚠ | P3-4 | A,C | P000483620 | 1VSA14932-4 | BOARD POWER SUPPLY (PW/SW-A) |
| ⚠ | P3-4 | B | P000483580 | 1VSA14930-4 | BOARD POWER SUPPLY (PW/SW-A) Consists of the following: |
| | | | **CAPACITORS** | | |
| | C013 | | | CE1JMZADL471 | ELECTROLYTIC CAP 470µF/50V M |
| | C014 | | | CE1EMASDL471 | ELECTROLYTIC CAP. 470µF/25V M |
| | C020 | | | CE1JMASDL220 | ELECTROLYTIC CAP. 22µF/50V M |
| | C022 | | | CE1GMASDL471 | ELECTROLYTIC CAP. 470µF/35V M |
| ⚠ | C1001 | | | CT2E683DC011 | METALIZED FILM CAP. 0.068µF/250V K |
| | C1004 | | | CA2H221S6029 | ELECTROLYTIC CAP. 220µF/400V M |
| ⚠ | C1006 | | | CCN2EMA0E222 | SAFTY CAP. 2200pF/250V |
| | C1029 | | | CCD3DKP0B221 | CERAMIC CAP. B K 220pF/2KV |
| | C1030 | | | CMA2AJS00683 | FILM CAP.(P) 0.068µF/ 100V J |
| | C1034 | | | CMA2AJS00393 | FILM CAP.(P) 0.039µF/ 100V J |
| | C1035 | | | CE0KMZADL332 | ELECTROLYTIC CAP. 3300µF/6.3V SL |
| | C1036 | | | CCD2JKP0B471 | CERAMIC CAP. B K 470pF/500V |
| | C1037 | | | CE1EMZADL222 | ELECTROLYTIC CAP. 2200µF/25V SL |
| | C1039 | | | CE1CMASDL471 | ELECTROLYTIC CAP. 470µF/16V M |
| | C1100 | | | CCA1JZTFZ104 | CERAMIC CAP.(AX) F Z 0.1µF/50V |
| | C1102 | | | CCD2JKP0B471 | CERAMIC CAP. B K 470pF/500V |
| | C1104 | | | CE1AMZADL472 | ELECTRIC CAP. 4700µF/ 10V |
| | C1105 | | | CE1AMZADL472 | ELECTRIC CAP. 4700µF/ 10V |
| | C1107 | | | CE1AMZADL222 | ELECTROLYTIC CAP. 2200µF/10V SL |
| | C1110 | | | CE1CMASDL221 | ELECTROLYTIC CAP. 220µF/16V M |
| | C1112 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C1113 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/50V |
| | C1114 | | | CE0KMASDL102 | ELECTROLYTIC CAP. 1000µF/6.3V M |
| | C1115 | | | CE0KMASDL102 | ELECTROLYTIC CAP. 1000µF/6.3V M |
| | C1116 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100µF/6.3V M |
| | C1117 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47µF/16V M |
| | C1118 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C1119 | | | CE1CMASDL471 | ELECTROLYTIC CAP. 470µF/16V M |
| | C1121 | | | CE1CMASDL470 | ELECTROLYTIC CAP. 47µF/16V M |
| | C1126 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C1127 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100µF/6.3V M |
| | C1128 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100µF/6.3V M |
| | C1129 | | | CE0KMASDL101 | ELECTROLYTIC CAP. 100µF/6.3V M |
| | C1130 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/50V |
| | C1131 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/50V |
| | C1132 | | | CE0KMASDL102 | ELECTROLYTIC CAP. 1000µF/6.3V M |
| | C1133 | | | CMA2AJS00102 | FILM CAP.(P) 0.001µF/ 100V J |
| | C1140 | | | CE1CMASDL101 | ELECTROLYTIC CAP. 100µF/16V M |
| | C1141 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/50V |
| | C1142 | | | CHD1JK30B104 | CHIP CERAMIC CAP.(1608) B K 0.1µF/50V |
| | | | **CONNECTORS** | | |
| | CN1001 | | | JCFNG30JG020 | FMN CONNECTOR TOP 30P 30FMN-BTRK-A(LF)(SN) |
| | CN1002 | | | J3PHC02JG017 | PH CONNECTOR (WHITE) TOP 2P B2B-PH-K-S(LF) |
| | | | **DIODES** | | |
| | D013 | | | NDQZ000BA158 | RECTIFIER DIODE BA158 |
| | D014 | | | NDQZ000SB390 | SCHOTTKY BARRIER DIODE SB390 |
| | D015 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D016 | | | NDQZ000SB340 | SCHOTTKY BARRIER DIODE SB340 |
| | D017 | | | QDTB00MTZJ16 | ZENER DIODE MTZJT-7716B |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | D018 | | | NDQZ000BA158 | RECTIFIER DIODE BA158 |
| | D019 | | | NDQZ000FR203 | RECTIFIER DIODE FR203-B/P |
| | D020 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | D1001 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1002 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1003 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1004 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1006 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1011 | | | QDTC00MTZJ24 | ZENER DIODE MTZJT-7724C |
| | D1022 | | | QDTB0MTZJ5R6 | ZENER DIODE MTZJT-775.6B |
| | D1023 | | | QDTA00MTZJ36 | ZENER DIODE MTZJT-7736A |
| | D1025 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1030 | | | NDQZ000SB340 | SCHOTTKY BARRIER DIODE SB340 |
| | D1031 | | | NDQZ000SB390 | SCHOTTKY BARRIER DIODE SB390 |
| | D1032 | | | NDQZ000SB340 | SCHOTTKY BARRIER DIODE SB340 |
| | D1035 | | | NDQZ000SB390 | SCHOTTKY BARRIER DIODE SB390 |
| | D1101 | | | NDQZ000SB140 | SCHOTTKY BARRIER DIODE SB140 |
| | D1102 | | | QDTB0MTZJ6R8 | ZENER DIODE MTZJT-776.8B |
| | D1103 | | | NDQZ000BA157 | RECTIFIER DIODE BA157 |
| | D1107 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | D1108 | | | QDTB00MTZJ20 | ZENER DIODE MTZJT-7720B |
| | D1109 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1110 | | | QDTB00MTZJ24 | ZENER DIODE MTZJT-7724B |
| | D1113 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | D1114 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | D1115 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1116 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1117 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1118 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1119 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1120 | | | QDTB00MTZJ10 | ZENER DIODE MTZJT-7710B |
| | D1121 | | | JW10.0T | BOARD JUMPER D0.6-P10.0 |
| | D1122 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1123 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1124 | | | QDTC0MTZJ5R6 | ZENER DIODE MTZJT-775.6C |
| | D1125 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | D1126 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1127 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1128 | | | NDQZ000SB140 | SCHOTTKY BARRIER DIODE SB140 |
| | D1129 | | | QDTB0MTZJ6R8 | ZENER DIODE MTZJT-776.8B |
| | D1130 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1131 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1132 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | D1133 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1134 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1135 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1136 | | | NDLZ001N5397 | DIODE 1N5397-B |
| | D1137 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1138 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1139 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1142 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1144 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | D1145 | | | QD1Z001SS400 | SWITCHING DIODE 1SS400 |
| | **ICS** | | | | |
| ⚠ | IC1001 | | P000459900 | NPEA000EL817 | PHOTOCOUPLER EL817A |
| | IC1101 | | P000459940 | NSZBA0TJY036 | IC SHUNT REGULATOR KIA431-AT/P |
| | IC1102 | | P000459940 | NSZBA0TJY036 | IC SHUNT REGULATOR KIA431-AT/P |
| | IC1103 | | P000457260 | QSZBA0SSH054 | VOLTAGE REGULATOR PQ070XF01SZH |
| | IC1104 | | P000457260 | QSZBA0SSH054 | VOLTAGE REGULATOR PQ070XF01SZH |
| | **COILS** | | | | |
| | L1001 | | | -------- | BEAD CORE ASSEMBLY E9770ED |
| | L1001-1 | | | JW20.0T | BOARD JUMPER D0.6-P20.0 |
| | L1001-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| | L1002 | | | -------- | BEAD CORE ASSEMBLY E9770ED |
| | L1002-1 | | | JW20.0T | BOARD JUMPER D0.6-P20.0 |
| | L1002-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| ⚠ | L1003 | | | LLEG0Z0TU001 | COIL LINE FILTER 56MH TLF24HB5630R3 |
| | L1004 | | | -------- | BEAD CORE ASSEMBLY E9770ED |
| | L1004-1 | | | JW20.0T | BOARD JUMPER D0.6-P20.0 |
| | L1004-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| | L1005 | | | -------- | BEAD CORE ASSEMBLY E9770ED |
| | L1005-1 | | | JW20.0T | BOARD JUMPER D0.6-P20.0 |
| | L1005-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| | L1013 | | | LLC220KKV007 | POWER INDUCTORS TWKBNP-220K |
| | L1014 | | | LLC100KTU026 | RADIAL LEADED INDUCTOR LHL13NB100K |
| | L1100 | | | LLC180KKV007 | POWER INDUCTORS TWKBNP-180K |
| | L1101 | | | LLC180KKV007 | POWER INDUCTORS TWKBNP-180K |
| | **TRANSISTORS** | | | | |
| ⚠ | Q1001 | | | QFWZ2SK3798Q | MOS FET 2SK3798(Q) |
| | Q1003 | | | QQSY2SC2120F | TRANSISTOR 2SC2120-Y(TE2 F T) |
| | Q1100 | | | NQEYKTC2026P | TRANSISTOR(PB FREE) KTC2026-Y/P |
| | Q1101 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q1102 | | | QQWZ00S2Y52Q | TRANSISTOR S2Y52(FUNAI Q H) |
| | Q1103 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1104 | | | NQSYKTC3203P | TRANSISTOR KTC3203-Y-AT/P |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | Q1105 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1106 | | | NQSYKTC3266P | TRANSISTOR KTC3266-Y-AT/P |
| | Q1107 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1108 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q1109 | | | NQEYKTC2026P | TRANSISTOR(PB FREE) KTC2026-Y/P |
| | Q1110 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q1111 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | Q1114 | | | NQSYKTA1267P | TRANSISTOR KTA1267-Y-AT/P |
| | Q1115 | | | NQSZKRC103MP | NPN TRANSISTOR KRC103M-AT/P |
| | | | **RESISTORS** | | |
| | R068 | | | RCX6JATZ0223 | CARBON RES. 1/6W J 22k Ω |
| ⚠ | R1001 | | | RCX2565FS001 | CARBON RES. 1/2W K 5.6M Ω |
| | R1003 | | | RW031R5PAK10 | CEMENT RESISTOR 3W K 1.5 Ω |
| | R1004 | | | RW051R0PAK10 | CEMENT RESISTOR 5W J 1.0 Ω H 10MM |
| | R1005 | | | RCX4JATZ0564 | CARBON RES. 1/4W J 560k Ω |
| | R1006 | | | RCX4JATZ0684 | CARBON RES. 1/4W J 680k Ω |
| | R1007 | | | RCX4JATZ0684 | CARBON RES. 1/4W J 680k Ω |
| | R1008 | | | RCX4JATZ0824 | CARBON RES. 1/4W J 820k Ω |
| | R1009 | | | RCX4JATZ0220 | CARBON RES. 1/4W J 22 Ω |
| | R1029 | | | RCX4JATZ0184 | CARBON RES. 1/4W J 180k Ω |
| | R1033 | | | RCX4JATZ0560 | CARBON RES. 1/4W J 56 Ω |
| | R1034 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1035 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1036 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1037 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1039 | | | RCX4JATZ0122 | CARBON RES. 1/4W J 1.2k Ω |
| | R1043 | | | RCX4JATZ0152 | CARBON RES. 1/4W J 1.5k Ω |
| | R1100 | | | RRXAJR5Z0391 | CHIP RES. 1/10W J 390 Ω |
| | R1101 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1102 | | | RRXAFR5H2001 | CHIP RES. 1/10W F 2k Ω |
| | R1104 | | | RCX4JATZ0182 | CARBON RES. 1/4W J 1.8k Ω |
| | R1106 | | | RRXAR47HH007 | CHIP RES.(1608) 1/10W J 0.47 Ω |
| | R1107 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R1108 | | | RCX4JATZ0152 | CARBON RES. 1/4W J 1.5k Ω |
| | R1110 | | | RCX4JATZ0102 | CARBON RES. 1/4W J 1k Ω |
| | R1111 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | R1112 | | | RRXAFR5H3000 | CHIP RES. 1/10W F 300 Ω |
| | R1113 | | | RRXAFR5H1001 | CHIP RES. 1/10W F 1.0k Ω |
| | R1114 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1115 | | | RRXAFR5H1001 | CHIP RES. 1/10W F 1.0k Ω |
| | R1117 | | | RCX4JATZ0222 | CARBON RES. 1/4W J 2.2k Ω |
| | R1118 | | | RN03102ZU001 | METAL OXIDE FILM RES. 3W J 1.0k Ω |
| | R1119 | | | RRXAJR5Z0224 | CHIP RES. 1/10W J 220k Ω |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | R1120 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1123 | | | RCX4JATZ0112 | CARBON RES. 1/4W J 1.1k Ω |
| | R1124 | | | RCX4JATZ0112 | CARBON RES. 1/4W J 1.1k Ω |
| | R1125 | | | RCX4JATZ0112 | CARBON RES. 1/4W J 1.1k Ω |
| | R1126 | | | RCX4JATZ0682 | CARBON RES. 1/4W J 6.8k Ω |
| | R1127 | | | RCX4JATZ0112 | CARBON RES. 1/4W J 1.1k Ω |
| | R1128 | | | RRXAJR5Z0103 | CHIP RES. 1/10W J 10k Ω |
| | R1129 | | | RCX6JATZ0104 | CARBON RES. 1/6W J 100k Ω |
| | R1130 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1131 | | | RRXAJR5Z0183 | CHIP RES. 1/10W J 18k Ω |
| | R1132 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1133 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1134 | | | RN02820ZU001 | METAL OXIDE FILM RES. 2W J 82 Ω |
| | R1135 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1136 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1138 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R1139 | | | RRXAJR5Z0682 | CHIP RES. 1/10W J 6.8k Ω |
| | R1140 | | | RCX2JZPZ0101 | CARBON RES. 1/2W J 100 Ω |
| | R1141 | | | RRXAJR5Z0272 | CHIP RES. 1/10W J 2.7k Ω |
| | R1142 | | | RCX4JATZ0222 | CARBON RES. 1/4W J 2.2k Ω |
| | R1143 | | | RRXAJR5Z0222 | CHIP RES. 1/10W J 2.2k Ω |
| | R1144 | | | RRXAFR5H1002 | CHIP RES. 1/10W F 10k Ω |
| | R1145 | | | RRXAFR5H1002 | CHIP RES. 1/10W F 10k Ω |
| | R1146 | | | RRXAFR5H1502 | CHIP RES. 1/10W F 15k Ω |
| | R1147 | | | RRXAFR5H1002 | CHIP RES. 1/10W F 10k Ω |
| | R1148 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R1149 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1150 | | | RCX4JATZ0202 | CARBON RES. 1/4W J 2k Ω |
| | R1151 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1152 | | | RRXAFR5H2200 | CHIP RES. 1/10W F 220 Ω |
| | R1153 | | | RRXAFR5H1501 | CHIP RES. 1/10W F 1.5k Ω |
| | R1154 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1155 | | | RRXAJR5Z0472 | CHIP RES. 1/10W J 4.7k Ω |
| | R1157 | | | RCX4JATZ0222 | CARBON RES. 1/4W J 2.2k Ω |
| | R1158 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R1159 | | | RRXAJR5Z0330 | CHIP RES. 1/10W J 33 Ω |
| | R1160 | | | RRXAJR5Z0224 | CHIP RES. 1/10W J 220k Ω |
| | R1161 | | | RCX4JATZ0824 | CARBON RES. 1/4W J 820k Ω |
| | R1162 | | | RCX4JATZ0100 | CARBON RES. 1/4W J 10 Ω |
| | R1163 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1164 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R1165 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1166 | | | RRXAJR5Z0473 | CHIP RES. 1/10W J 47k Ω |
| | R1167 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | | | **MISCELLANEOUS** | | |
| ⚠ | AC1001 | A,C | P000468380 | WAE0172LW011 | POWER CORD PE8G2CG9G0AB05 |
| ⚠ | AC1001 | B | P000468300 | WAB0182LW016 | POWER CORD PE8G2X91H0AA061 |
| | B-5A | | | 1VM422057 | POWER HEATSINK E4340UD |
| | B-5B | | | 1VM422057 | POWER HEATSINK E4340UD |
| | CL1001 | | | JCFNG30JG020 | FMN CONNECTOR TOP 30P 30FMN-BTRK-A(LF)(SN) |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| ⚠ | F1001 | | P000459950 | PAGC20BW3162 | FUSE T1.6AL/250V |
| | FH1001 | | | XH01Z00LY002 | FUSE HOLDER MSF-015 LF (B110) |
| | FH1002 | | | XH01Z00LY002 | FUSE HOLDER MSF-015 LF (B110) |
| | L-9N | | | GBJS3060 | SCREW S-TIGHT M3X6 BIND HEAD+ |
| | L-9O | | | GBJS3060 | SCREW S-TIGHT M3X6 BIND HEAD+ |
| ⚠ | SA1001 | | P000457210 | NVQZ10D471KB | SURGE ABSORBER 470V+-10PER |
| ⚠ | T1001 | | | LTTZPE0KT008 | TRANS POWER 6716 |
| | W2 | | P000472850 | WX1E4340-002 | FFC PW-MAIN 30P 30PIN/ TL280MM |
| | W3 | | P000472860 | WX1E4340-003 | FFC AV-PW 30P 30PIN/ TL90MM |
| | W4 | | P000472870 | WX1E4340-004 | FFC AV-SW 20P 20PIN/ TL140MM |
| | W8 | | P000472900 | WX1E4340-008 | WIRE ASSEMBLY 4P AWG22/ 105MM |

## BOARD FRONT JACK

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P3-2 | A,C | P000483600 | 1VSA14932-2 | BOARD FRONT JACK (PW/SW-B) |
| | P3-2 | B | P000483560 | 1VSA14930-2 | BOARD FRONT JACK (PW/SW-B) |
| | | | | | Consists of the following: |
| | | | **CAPACITORS** | | |
| | C3006 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C3007 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | | | **CONNECTOR** | | |
| | CN3001 | | | JCFNG20JG022 | FMN CONNECTOR SIDE 20P 20FMN-STRK-A(LF)(SN) |
| | | | **DIODES** | | |
| | D3001 | | | NPQZ0012541T | LED(RED) 1254IT |
| | D3002 | | | NPQZ0012541T | LED(RED) 1254IT |
| | D3003 | | P000468280 | NPQZ1CHJGTN N | LED(GREEN) LTL1CHJGTNN |
| | D3004 | | | NPQ3L1CHCBK2 | LED(BLUE) LTL1CHCBK2-F |
| | D3005 | | | NPQZ1CHKYKN N | LED(AMBER YELLOW) LTL1CHKYKNN |
| | D3008 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D3009 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D3010 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D3011 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | | | **IC** | | |
| | IC3001 | | P000457080 | JXEL040RP003 | MINI DIN SOCKET MDC1-34-020 |
| | | | **RESISTORS** | | |
| | R3001 | | | RCX4JATZ0100 | CARBON RES. 1/4W J 10 Ω |
| | R3002 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R3003 | | | RCX4JATZ0100 | CARBON RES. 1/4W J 10 Ω |
| | R3004 | | | RCX6JATZ0121 | CARBON RES. 1/6W J 120 Ω |
| | R3005 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R3006 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R3007 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R3008 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R3010 | | | RCX6JATZ0151 | CARBON RES. 1/6W J 150 Ω |
| | R3011 | | | RCX6JATZ0470 | CARBON RES. 1/6W J 47 Ω |
| | R3013 | | | RRXAJR5Z0471 | CHIP RES. 1/10W J 470 Ω |
| | R3014 | | | RRXAJR5Z0821 | CHIP RES. 1/10W J 820 Ω |
| | R3015 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R3016 | | | RRXAJR5Z0152 | CHIP RES. 1/10W J 1.5k Ω |
| | R3017 | | | RRXAJR5Z0272 | CHIP RES. 1/10W J 2.7k Ω |
| | R3018 | | | RRXAJR5Z0562 | CHIP RES. 1/10W J 5.6k Ω |
| | R3022 | | | RCX4JATZ0620 | CARBON RES. 1/4W J 62 Ω |
| | | | **SWITCHES** | | |
| | SW3001 | | P000472810 | SST0101HH036 | SWITCH TACT KSM0634B PB(F) |
| | SW3002 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3003 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3004 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3005 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3006 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3007 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | | | **MISCELLANEOUS** | | |
| | B-9A | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-9B | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-9C | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-9D | | | 0VM409508 | BUSH LED(F) H3700UD |
| | B-9E | | | 0VM409508 | BUSH LED(F) H3700UD |
| | JK3001 | | P000457110 | JXRL010LY135 | JACK RCA(YELLOW) MTJ-032-05B-20(B110) |
| | JK3002 | | P000457120 | JXRL010LY136 | JACK RCA(WHITE) MTJ-032-05B-22(B110) |
| | JK3003 | | P000457090 | JYRL010LY029 | JACK RCA(RED) MTJ-032-05A-21(B110) |
| | W7 | | P000472890 | WX1E4340-007 | PARALLEL WIRE 5P AWG26#2651/ 146MM |

## BOARD SWITCH

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P3-1 | A,C | P000483590 | 1VSA14932-1 | BOARD SWITCH (PW/SW-C) |
| | P3-1 | B | P000483550 | 1VSA14930-1 | BOARD SWITCH (PW/SW-C) |
| | | | | | Consists of the following: |
| | | | **DIODE** | | |
| | D3007 | | P000468280 | NPQZ1CHJGTN N | LED(GREEN) LTL1CHJGTNN |
| | | | **RESISTOR** | | |
| | R3021 | | | RRXAJR5Z0152 | CHIP RES. 1/10W J 1.5k Ω |
| | | | **SWITCHES** | | |
| | SW3008 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3009 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | SW3010 | | P000472800 | SST0101HH013 | TACT SWITCH KSM0614B |
| | | | **MISCELLANEOUS** | | |
| | B-9F | | | 0VM409508 | BUSH LED(F) H3700UD |

## BOARD REAR JACK

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P3-3 | A,C | P000483610 | 1VSA14932-3 | BOARD REAR JACK (PW/SW-D) |
| | P3-3 | B | P000483570 | 1VSA14930-3 | BOARD REAR JACK (PW/SW-D) |
| | | | | | Consists of the following: |
| | | | **CAPACITORS** | | |
| | C2001 | | | CE1CMASDL101 | ELECTROLYTIC CAP. 100μF/16V M |
| | C2002 | | | CE0KMASDL471 | ELECTROLYTIC CAP. 470μF/6.3V M |
| | C2003 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C2004 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C2005 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C2006 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | C2007 | | | CHD1JK30B222 | CHIP CERAMIC CAP. B K 2200pF/50V |
| | C2008 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C2009 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M |
| | C2010 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M |
| | C2011 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | C2012 | | | CE1JMASDL1R0 | ELECTROLYTIC CAP. 1µF/ 50V M |
| | C2013 | | | CHD1JK30B102 | CHIP CERAMIC CAP.(1608) B K 1000pF/ 50V |
| | **DIODES** | | | | |
| | D2001 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2002 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2003 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2004 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2005 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2006 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2007 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2008 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2009 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | D2010 | | | QDTA00MTZJ11 | ZENER DIODE MTZJT-7711A |
| | **COILS** | | | | |
| | L2003 | | | ------- | BEAD CORE ASSEMBLY E9770ED |
| | L2003-1 | | | JW35.0T | BOARD JUMPER D0.6-P35.0 |
| | L2003-2 | | | XL03010XM001 | BEAD CORE B16 RH 3.5X10X1.3 |
| | **TRANSISTORS** | | | | |
| | Q2001 | | | NQS4KTA1266P | TRANSISTOR KTA-1266-GR-AT/P |
| | Q2002 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | Q2003 | | | NQSYKTC3199P | TRANSISTOR KTC3199-Y-AT/P |
| | **RESISTORS** | | | | |
| | R2001 | | | RCX6JATZ0681 | CARBON RES. 1/6W J 680 Ω |
| | R2002 | | | RRXAJR5Z0221 | CHIP RES. 1/10W J 220 Ω |
| | R2003 | | | RCX4JATZ0750 | CARBON RES. 1/4W J 75 Ω |
| | R2005 | | | RCX4JATZ0821 | CARBON RES. 1/4W J 820 Ω |
| | R2006 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R2007 | | | RCX4JATZ0821 | CARBON RES. 1/4W J 820 Ω |
| | R2008 | | | RCX4JATZ0221 | CARBON RES. 1/4W J 220 Ω |
| | R2009 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R2010 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R2011 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | R2012 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R2013 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R2014 | | | RRXAJR5Z0750 | CHIP RES. 1/10W J 75 Ω |
| | **MISCELLANEOUS** | | | | |
| | B-24 | | | 1VM423185 | 21P PLATE EARTH E7B20ED |
| | JK2001 | | P000459840 | JXGL210LY006 | RGB CONNECTOR MRC-021V-03 ABS(B11 |
| | JW2001 | | P000460080 | WX1E7B20-002 | FLAT CABLE 15P AWG26#2651/P2.0/70 |

# BOARD AFV

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P5<br>P5 | A,B<br>C | P000472710<br>P000473050 | 1VSA12639<br>1VSA13522 | BOARD AFV<br>BOARD AFV<br>Consists of the following: |
| | **CAPACITORS** | | | | |
| | C1 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C4 | | | CHD1JJ3CH560 | CHIP CERAMIC CAP. CH J 56pF/50V |
| | C5 | | | CHD1JJ3CH220 | CHIP CERAMIC CAP.(1608) CH J 22pF/50V |
| | C6 | | | CHD1JJ3CH560 | CHIP CERAMIC CAP. CH J 56pF/50V |
| | C7 | | | CHD1JC3CH3R0 | CHIP CERAMIC CAP. CH C 3pF/50V |
| | C8 | | | CHD1JC3CH3R0 | CHIP CERAMIC CAP. CH C 3pF/50V |
| | C11 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C12 | | | CE1CMASSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C13 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C14 | | | CHD1JK30B103 | CHIP CERAMIC CAP.(1608) B K 0.01µF/ 50V |
| | C15 | | | CE1CMASSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C16 | | | CE1CMASSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C17 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C19 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C20 | | | CE1JMASSL3R3 | ELECTROLYTIC CAP. 3.3µF/50V M H7 |
| | C21 | | | CHD1JZ30F104 | CHIP CERAMIC CAP.(1608) F Z 0.1µF/50V |
| | C22 | | | CE1CMASSL100 | ELECTROLYTIC CAP. 10µF/16V M H7 |
| | C23 | C | | CHD1AZ30F474 | CHIP CERAMIC CAP. F Z 0.47µF/10V |
| | C24 | | | CE1JMASSLR22 | ELECTROLYTIC CAP. 0.22µF/50V M H7 |
| | C27 | | | CCA1JZTFZ104 | CERAMIC CAP.(AX) F Z 0.1µF/50V |
| | **CONNECTOR** | | | | |
| | CN1 | | | JTED009ER045 | ANGLE PIN HEADER 9P IMSA-6029B-1-09Z003- |
| | **DIODE** | | | | |
| | D2 | | | QDTZ001SS133 | SWITCHING DIODE 1SS133(T-77) |
| | **IC** | | | | |
| | IC1 | | P000459920 | NSZBA0SP3005 | IC AUDIO PROCESSOR MSP3417G-QG-B8-V3 |
| | **COILS** | | | | |
| | L1 | | | LLAXKATTU100 | INDUCTOR 10µH-K-26T |
| | L2 | | | JW5.0T | BOARD JUMPER D0.6-P5.0 |
| | L3 | | | LLAXKATTU180 | INDUCTOR 18µH-K-26T |
| | L4 | | | LLAXKATTU100 | INDUCTOR 10µH-K-26T |
| | **RESISTORS** | | | | |
| | R1 | | | RRXAJR5Z0102 | CHIP RES. 1/10W J 1k Ω |
| | R2 | C | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R4 | | | RRXAJR5Z0124 | CHIP RES. 1/10W J 120k Ω |
| | R5 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R6 | | | RRXAZR5Z0000 | CHIP RES.(1608) 1/10W 0 Ω |
| | R7 | C | | RRXAJR5Z0122 | CHIP RES. 1/10W J 1.2k Ω |
| | **MISCELLANEOUS** | | | | |
| | X1 | | P000468230 | FXD186LLN001 | XTAL 18.432MHz |

# BOARD ATA

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | P6 | | P000472730 | 1VSA13582 | BOARD ATA<br>Consists of the following: |
| **CONNECTORS** | | | | | |
| | CN3001 | | | JCYKC40JC002 | IDC SOCKET 40PIN VT<br>YKF43-0025 |
| | CN3002 | | | JCFHD40HQ007 | FPC/FFC<br>CONNECTOR(40PIN)<br>FH12-40S-0.5SH(89) |

# DECK MECHANISM SECTION

# HDD & DVD / Video Cassette Recorder

# RD-XV45KE/RD-XV45KB/RD-XV45KF

**Deck Mechanism Section**

- **Standard Maintenance**
- **Mechanism Alignment Procedures**
- **Disassembly / Assembly of Mechanism**
- **Deck Exploded Views**
- **Deck Parts List**

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# STANDARD MAINTENANCE

## Service Schedule of Components

This maintenance chart shows you the standard of replacement and cleaning time for each part.
Because those may replace depending on environment and purpose for use, use the chart for reference.

h: Hours ○: Cleaning ●: Replace

| Deck | | Periodic Service Schedule | | | |
|---|---|---|---|---|---|
| **Ref.No.** | **Part Name** | **1,000 h** | **2,000 h** | **3,000 h** | **4,000 h** |
| B2 | Cylinder Assembly | ○ | ● | ○ | ● |
| B3 | Loading Motor Assembly | | | ● | |
| B8 | Pulley Assembly | | ● | | ● |
| B587 | Tension Lever Assembly | | ● | | ● |
| B31 | ACE Head Assembly | | | ● | |
| B573, B574 | Reel S, Reel T | | | ● | |
| B37 | Capstan Motor | | ● | | ● |
| B52 | Cap Belt | | ● | | ● |
| *B73 | FE Head | | | ● | |
| *B86 | F Brake Assembly (HI) | | ● | | ● |
| B133 | Idler Assembly (HI) | | ● | | ● |
| B410 | Pinch Arm Assembly | | ● | | ● |
| B414 | M Brake (SP) Assembly (HI) | | ● | | ● |
| B416 | M Brake (TU) Assembly (HI) | | ● | | ● |
| B525 | LDG Belt | | ● | | ● |

**Notes:**

1. Clean all parts for the tape transport (Upper Drum with Video Head / Pinch Roller / ACE Head / FE Head) using 90% ethyl alcohol.
2. After cleaning the parts, do all DECK ADJUSTMENTS.
3. For the reference numbers listed above, refer to Deck Exploded Views.
   * B73 ------ Recording model only
   * B86 ------ Not used in 2 head model.

# Cleaning

## Cleaning of Video Head

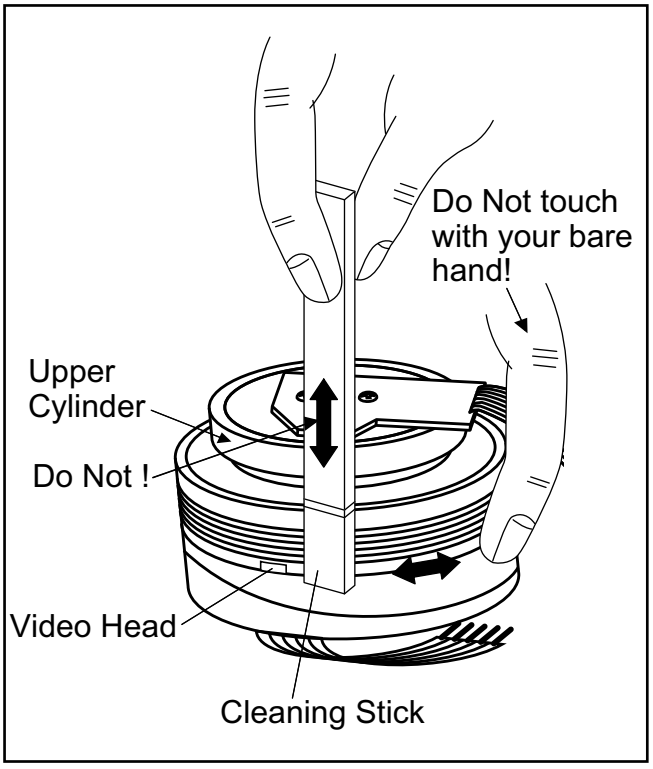
Clean the head with a head cleaning stick or chamois cloth.

**Procedure**

1. Remove the top cabinet.
2. Put on a glove (thin type) to avoid touching the upper and lower drum with your bare hand.
3. Put a few drops of 90% ethyl alcohol on the head cleaning stick or on the chamois cloth and, by slightly pressing it against the head tip, turn the upper drum to the right and to the left.

**Notes:**

1. The video head surface is made of very hard material, but since it is very thin, avoid cleaning it vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit.
3. Do not reuse a stained head cleaning stick or a stained chamois cloth.




## Cleaning of ACE Head

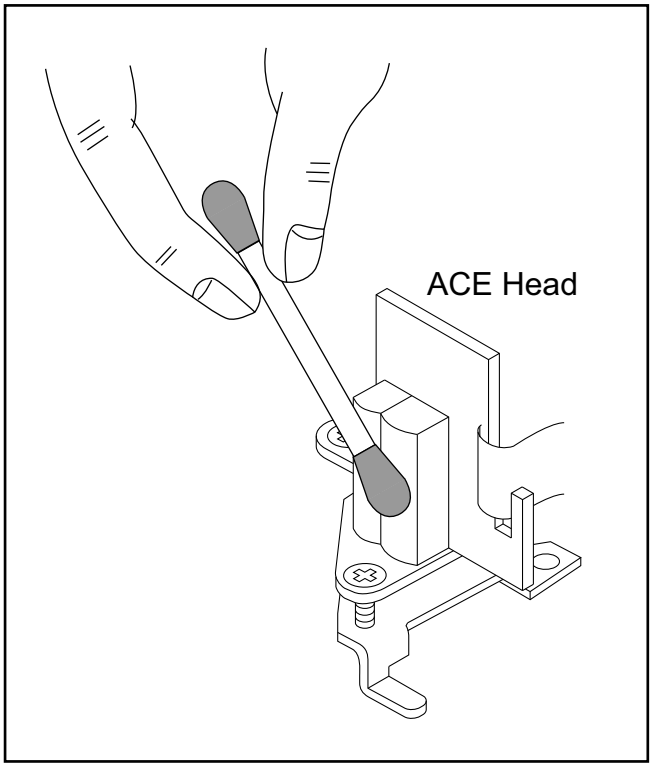
Clean the head with a cotton swab.

**Procedure**

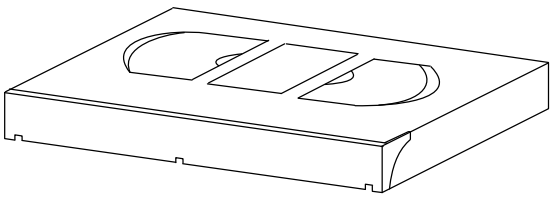
1. Remove the top cabinet.
2. Dip the cotton swab in 90% ethyl alcohol and clean the ACE Head. Be careful not to damage the upper drum and other tape running parts.

**Notes:**

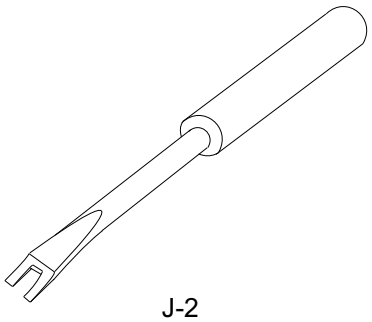
1. Avoid cleaning the ACE Head vertically.
2. Wait for the cleaned part to dry thoroughly before operating the unit or damage may occur.



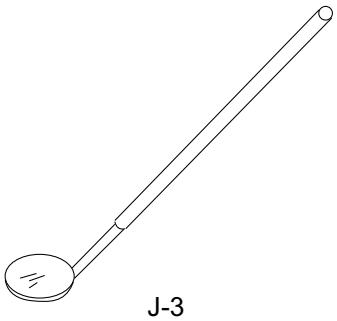
# SERVICE FIXTURE AND TOOLS



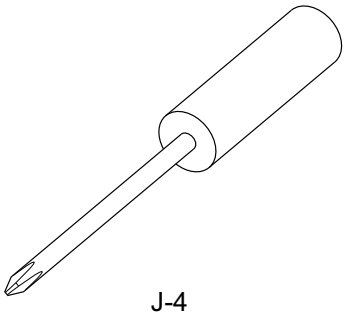
J-1-1, J-1-2



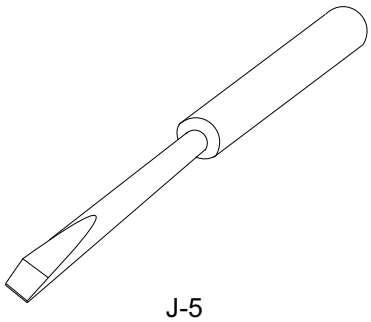
J-2



J-3



J-4



J-5

| Ref. No. | Name | Part No. | Adjustment |
|---|---|---|---|
| J-1-1 | Alignment Tape | FL6A | Head Adjustment of ACE Head |
| J-1-2 | Alignment Tape | FL6N8<br>(2 Head model)<br>FL6NS8<br>(4 Head model) | Azimuth and X Value Adjustment of ACE Head / Adjustment of Envelope Waveform |
| J-2 | Guide Roller Adj. Screwdriver | Available Locally | Guide Roller |
| J-3 | Mirror | Available Locally | Tape Transportation Check |
| J-4 | Azimuth Adj. Screwdriver + | Available Locally | ACE Head Height |
| J-5 | Flat Screwdriver - | Available Locally | X Value |

# MECHANICAL ALIGNMENT PROCEDURES

Explanation of alignment for the tape to correctly run starts on the next page. Refer to the information below on this page if a tape gets stuck, for example, in the mechanism due to some electrical trouble of the unit.

## Service Information

**A.** Method for Manual Tape Loading/Unloading

To load a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Insert a cassette tape. Though the tape will not be automatically loaded, make sure that the cassette tape is all the way in at the inlet of the Cassette Holder. To confirm this, lightly push the cassette tape further in and see if the tape comes back out, by a spring motion, just as much as you have pushed in.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 for a minute or two to complete this task.

To unload a cassette tape manually:

1. Disconnect the AC plug.
2. Remove the Top Case and Front Assembly.
3. Make sure that the Moving guide preparations are in the Eject Position.
4. Turn the LDG Belt in the appropriate direction shown in Fig. M1 until the Moving guide preparations come to the Eject Position. Stop turning when the preparations begin clicking or can not be moved further. However, the tape will be left wound around the cylinder.
5. Turn the LDG Belt in the appropriate direction continuously, and the cassette tape will be ejected. Allow a minute or two to complete this task.

**B.** Method to place the Cassette Holder in the tape-loaded position without a cassette tape

1. Disconnect the AC Plug.
2. Remove the Top Case and Front Assembly.
3. Turn the LDG Belt in the appropriate direction shown in Fig. M1. Release the locking tabs shown in Fig. M1 and continue turning the LDG Belt until the Cassette Holder comes to the tape-loaded position. Allow a minute or two to complete this task.

**Top View**

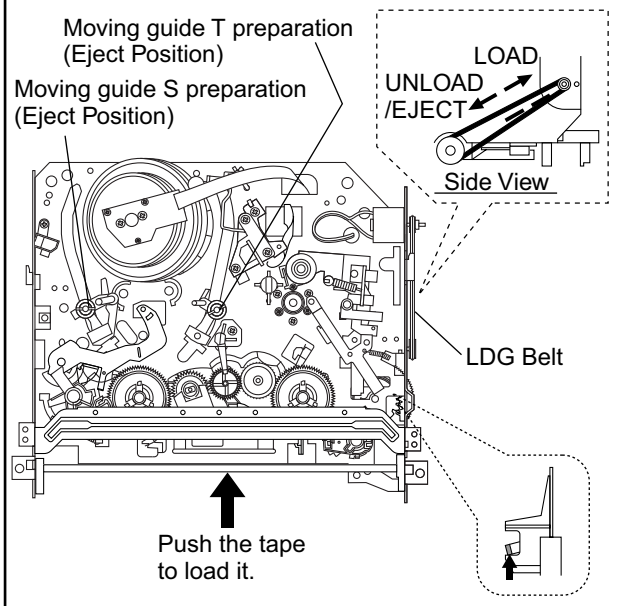



**Fig. M1**

**Bottom View**

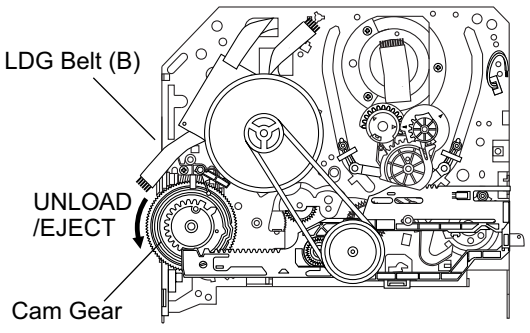



**Fig. M2**

# 1. Tape Interchangeability Alignment

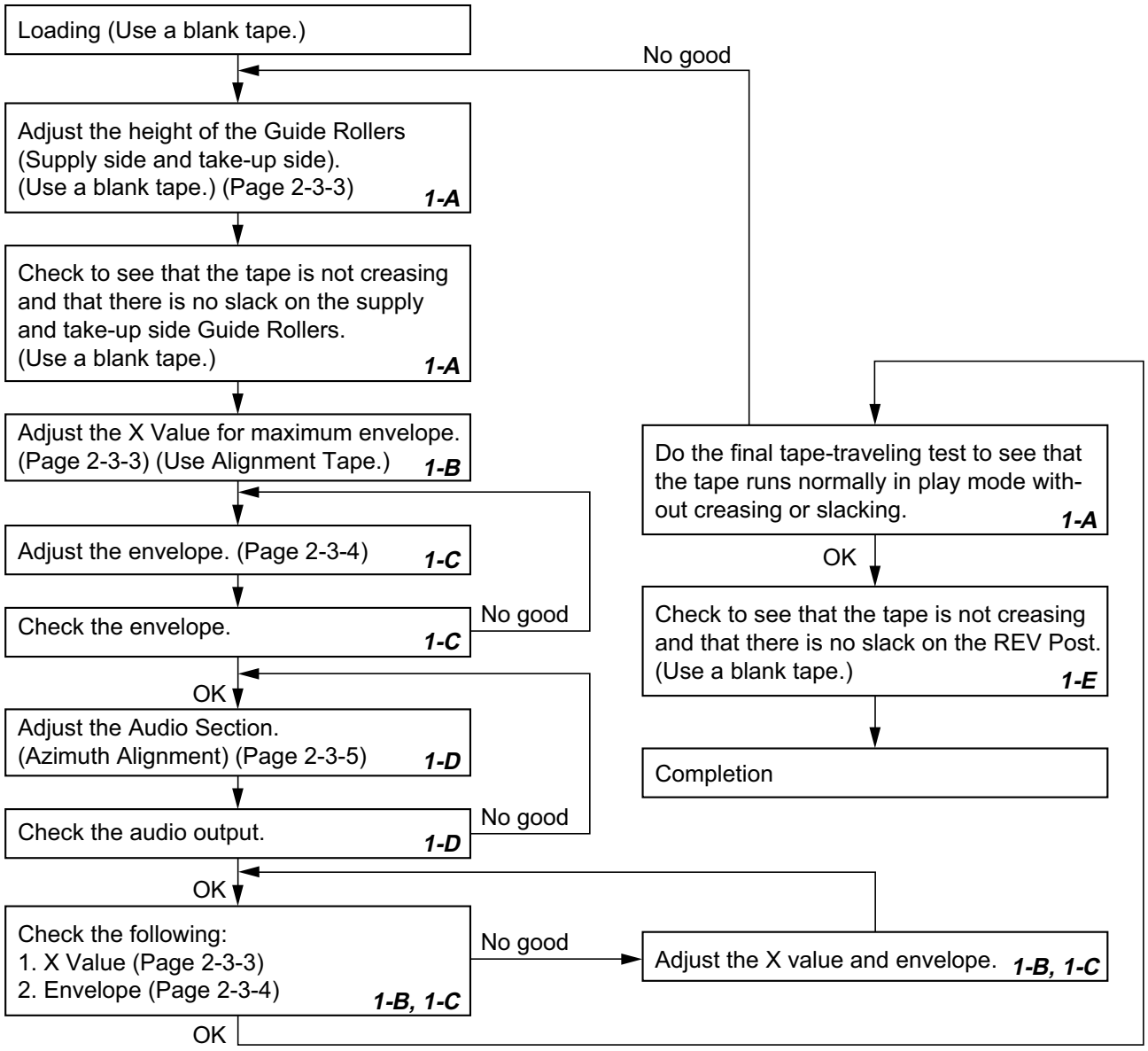
Note:
To do these alignment procedures, make sure that the Tracking Control Circuit is set to the preset position every time a tape is loaded or unloaded. (Refer to page 2-3-4, procedure 1-C, step 2.)

**Equipment required:**

Dual Trace Oscilloscope
VHS Alignment Tape (FL6NS8)
Guide Roller Adj. Screwdriver
Flat Screwdriver (Purchase Locally)

Note: Before starting this Mechanical Alignment, do all Electrical Adjustment procedures.

**Flowchart of Alignment for tape traveling**


Loading (Use a blank tape.)
No good
Adjust the height of the Guide Rollers (Supply side and take-up side). (Use a blank tape.) (Page 2-3-3) 1-A
Check to see that the tape is not creasing and that there is no slack on the supply and take-up side Guide Rollers. (Use a blank tape.) 1-A
Adjust the X Value for maximum envelope. (Page 2-3-3) (Use Alignment Tape.) 1-B
Adjust the envelope. (Page 2-3-4) 1-C
Check the envelope. 1-C
No good
OK
Adjust the Audio Section. (Azimuth Alignment) (Page 2-3-5) 1-D
Check the audio output. 1-D
No good
OK
Check the following:
1. X Value (Page 2-3-3)
2. Envelope (Page 2-3-4) 1-B, 1-C
No good
Adjust the X value and envelope. 1-B, 1-C
OK
Do the final tape-traveling test to see that the tape runs normally in play mode without creasing or slacking. 1-A
OK
Check to see that the tape is not creasing and that there is no slack on the REV Post. (Use a blank tape.) 1-E
Completion

## 1-A. Preliminary/Final Checking and Alignment of Tape Path

**Purpose:**

To make sure that the tape path is well stabilized.

**Symptom of Misalignment:**

If the tape path is unstable, the tape will be damaged.

**Note:** Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Playback a blank cassette tape and check to see that the tape runs without creasing at Guide Rollers [2] and [3], and at points A and B on the lead surface. (Refer to Fig. M3 and M4.)
2. If creasing is apparent, align the height of the guide rollers by turning the top of Guide Rollers [2] and [3] with a Guide Roller Adj. Screwdriver. (Refer to Fig. M3 and M5.)

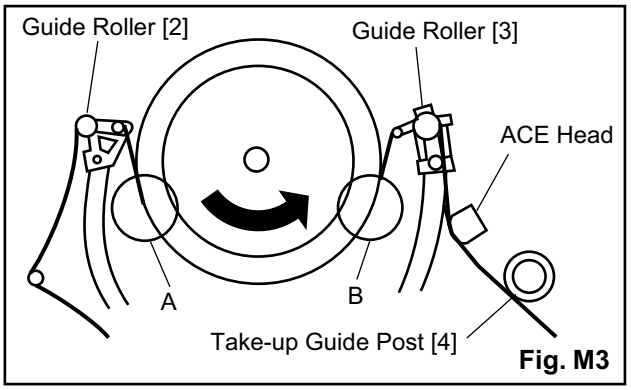


**Fig. M3**

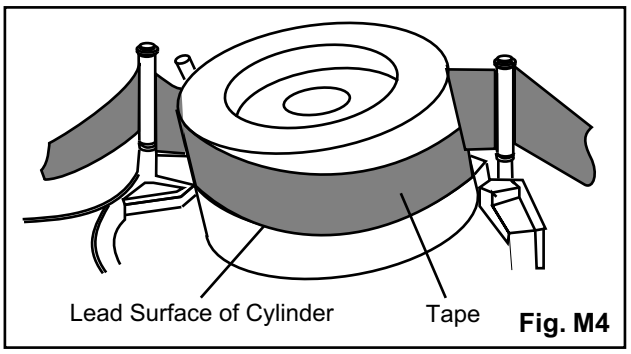


**Fig. M4**

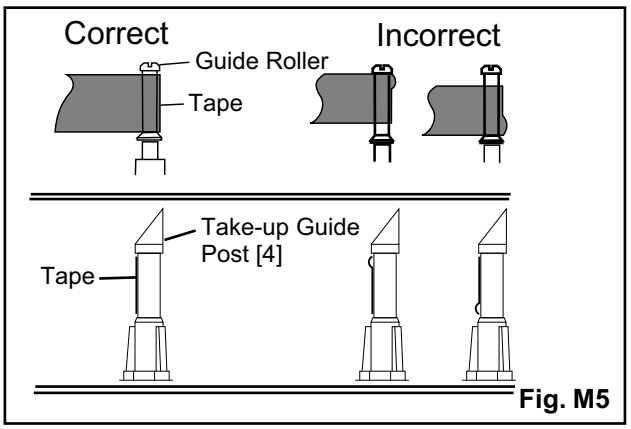


**Fig. M5**

3. Check to see that the tape runs without creasing at Take-up Guide Post [4] or without snaking between Guide Roller [3] and ACE Head. (Fig. M3 and M5)
4. If creasing or snaking is apparent, adjust the Tilt Adj. Screw of the ACE Head. (Fig. M6)

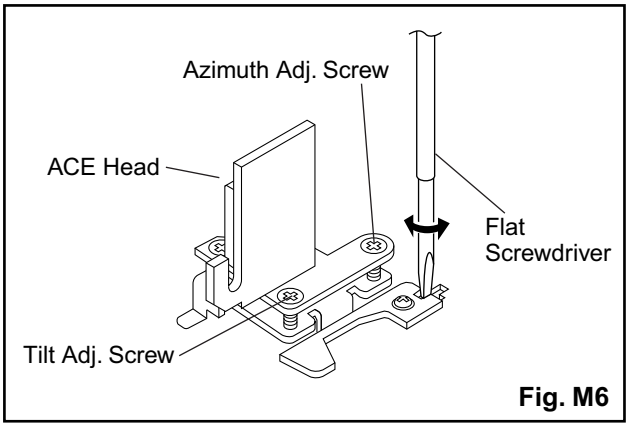


**Fig. M6**

## 1-B. X Value Alignment

**Purpose:**

To obtain maximum PB FM envelope signal at the preset position of the Tracking Control Circuit, align the Horizontal Position of the ACE Head.

**Symptom of Misalignment:**

If the Horizontal Position of the ACE Head is not properly aligned, maximum PB FM envelope cannot be obtained at the preset position of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) and TP503 (CTL) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale of the Alignment Tape (FL6NS8) and confirm that the PB FM signal is present.
3. Set the Tracking Control Circuit to the preset position by pressing CH UP button and then “PLAY” button on the unit. (Refer to note on bottom of page 2-3-4.)
4. Use the Flat Screwdriver so that the PB FM signal at TP301 (C-PB) is maximum. (Fig. M6)

5. To shift the CTL waveform, press CH UP or CH DOWN button on the remote control unit. Then make sure that the maximum output position of PB FM envelope signal becomes within ±2ms from preset position.

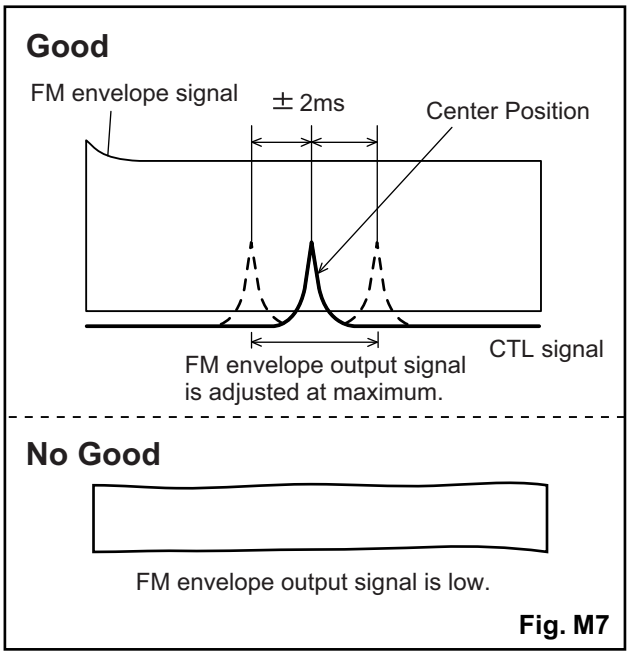



**Fig. M7**

6. Set the Tracking Control Circuit to the preset position by pressing CH UP button and then "PLAY" button on the unit.

## 1-C. Checking/Adjustment of Envelope Waveform

**Purpose:**

To achieve a satisfactory picture, adjust the Guide Rollers so that the PB FM envelope becomes as flat as possible.

**Symptom of Misalignment:**

If the envelope output is poor, noise will appear in the picture. The tracking will then lose precision and the playback picture will be distorted by any slight variation of the Tracking Control Circuit.

1. Connect the oscilloscope to TP301 (C-PB) on the Main CBA. Use TP504 (RF-SW) as a trigger.
2. Playback the Gray Scale on the Alignment Tape (FL6NS8). Set the Tracking Control Circuit to the preset position by pressing CH UP button and then "PLAY" button on the unit. Adjust the height of Guide Rollers [2] and [3] (Fig. M3, Page 2-3-3) watching the oscilloscope display so that the envelope becomes as flat as possible. To do this adjustment, turn the top of the Guide Roller with the Guide Roller Adj. Screwdriver.
3. If the envelope is as shown in Fig. M8, adjust the height of Guide Roller [2] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M10.
4. If the envelope is as shown in Fig. M9, adjust the height of Guide Roller [3] (Refer to Fig. M3) so that the waveform looks like the one shown in Fig. M10.
5. When Guide Rollers [2] and [3] (Refer to Fig. M3) are aligned properly, there is no envelope drop either at the beginning or end of track as shown in Fig. M10.

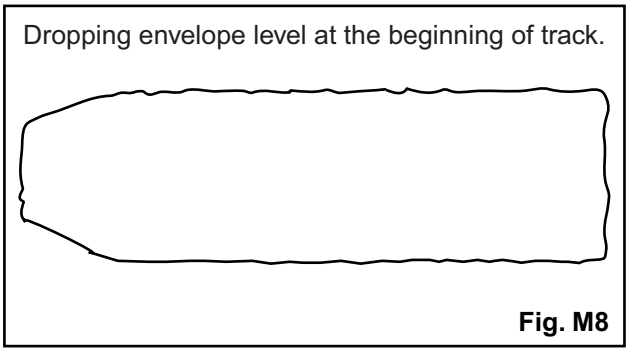



**Fig. M8**

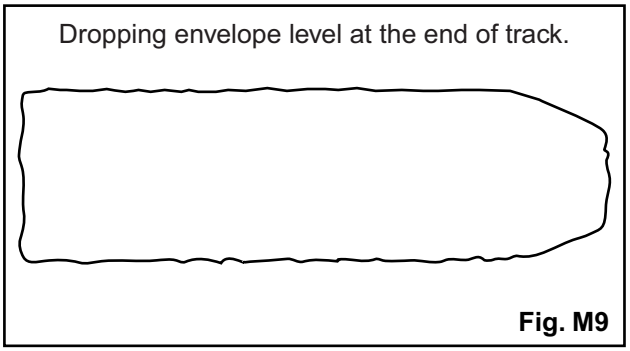



**Fig. M9**

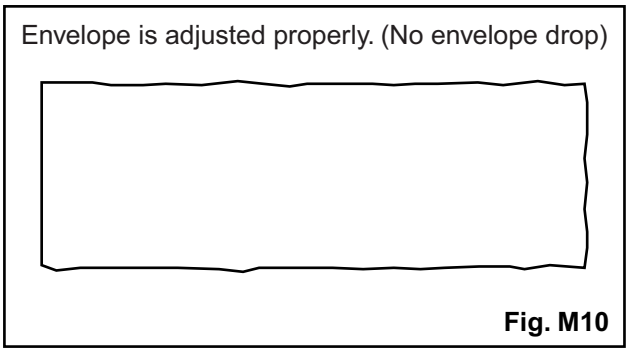



**Fig. M10**

Note: Upon completion of the adjustment of Guide Rollers [2] and [3] (Refer to Fig. M3), check the X Value by pushing the CH UP or DOWN buttons on the unit alternately, to check the symmetry of the envelope. Check the number of pushes to ensure preset position. The number of pushes of the CH UP button on the unit to achieve 1/2 level of envelope should match the number of pushes of the CH DOWN button on the unit from center. If required, redo the "X Value Alignment."

## 1-D. Azimuth Alignment of Audio/Control/ Erase Head

**Purpose:**

To correct the Azimuth alignment so that the Audio/ Control/Erase Head meets tape tracks properly.

**Symptom of Misalignment:**

If the position of the Audio/Control/Erase Head is not properly aligned, the Audio S/N Ratio or Frequency Response will be poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Playback the alignment tape (FL6NS8) and confirm that the audio signal output level is 8kHz.
3. Adjust Azimuth Adj. Screw so that the output level on the AC Voltmeter or the waveform on the oscilloscope is at maximum. (Fig. M6)

Note: Upon completion of the adjustment of Azimuth Adj. Screw, check the X Value by pushing the CH UP or DOWN buttons on the unit alternately, to check the symmetry of the envelope. Check the number of pushes to ensure preset position. The number of pushes of the CH UP button on the unit to achieve 1/2 level of envelope should match the number of pushes of the CH DOWN button on the unit from center. If required, redo the “X Value Alignment.”

## 1-E. Checking and Alignment of Tape Path during reversing

**Purpose:**

To make sure that the tape path is well stabilized during reversing.

**Symptom of Misalignment:**

If the tape path is unstable during reversing, the tape will be damaged.

**Note:** Do not use an Alignment Tape for this procedure. If the unit is not correctly aligned, the tape may be damaged.

1. Insert a blank cassette tape into the tray and set the unit to REV. Then confirm if the tape has been curled up or bent at the Take-up Guide Post[4] or REV Post[5]. (Refer to Fig. M11 and M12.)
2. When the tape has been curled up or bent, turn the alignment screw to adjust the height of REV Post. (Refer to Fig. M11 and M13.)

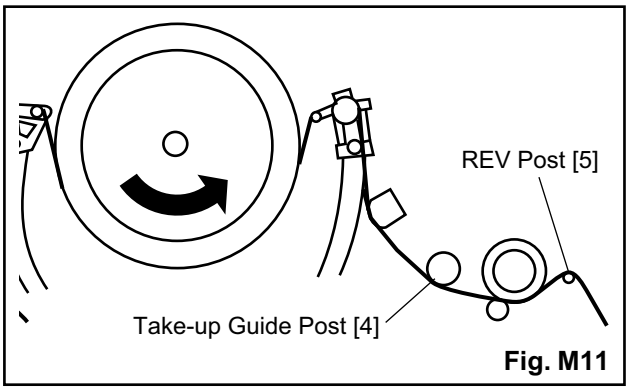


**Fig. M11**

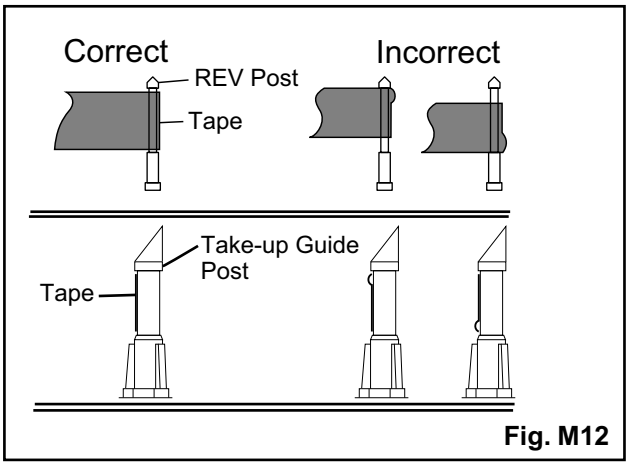


**Fig. M12**

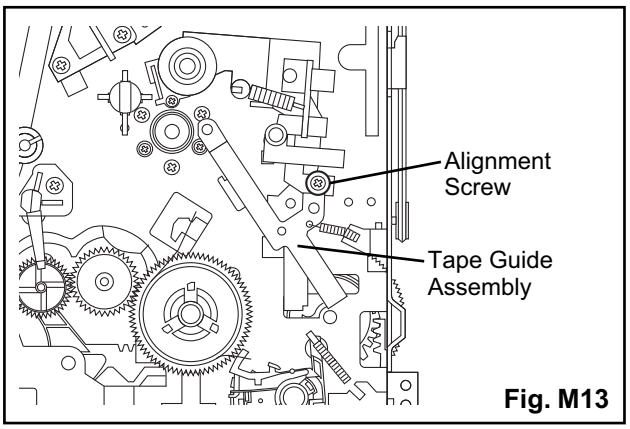


**Fig. M13**

# DISASSEMBLY/ASSEMBLY PROCEDURES OF DECK MECHANISM

Before following the procedures described below, be sure to remove the deck assembly from the cabinet. (Refer to CABINET DISASSEMBLY INSTRUCTIONS.)
All the following procedures, including those for adjustment and replacement of parts, should be done in Eject mode; see the positions of [44] and [45] in Fig. DM1H on page 2-4-3. When reassembling, follow the steps in reverse order.

| STEP /LOC. No. | START-ING No. | PART | | REMOVAL | | INSTALLATION |
|---|---|---|---|---|---|---|
| | | | | Fig. No. | REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER | ADJUSTMENT CONDITION |
| [1] | [1] | Guide Holder A | T | DM3H | 2(S-1) | |
| [2] | [1] | Cassette Holder Assembly | T | DM4H | | |
| [3] | [2] | Slider (SP) | T | DM5H | (S-1A), *(L-1) | |
| [4] | [2] | Slider (TU) | T | DM5H | *(L-2) | |
| [5] | [4] | Lock Lever | T | DM5H | *(L-3), *(P-1) | |
| [6] | [2] | Cassette Plate | T | DM5H | | |
| [7] | [7] | Cylinder Assembly | T | DM1H, DM6H | Desolder, 3(S-2) | |
| [8] | [8] | Loading Motor Assembly | T | DM1H, DM7H | Desolder, LDG Belt, 2(S-3) | |
| [9] | [9] | ACE Head Assembly | T | DM1H, DM7H | (S-4) | |
| [10] | [2] | Tape Guide Arm Assembly | T | DM1H, DM8H-1 | *(P-2) | |
| [11] | [10] | C Door Opener | T | DM1H, DM8H-1 | (S-4A), *(L-4) | |
| [12] | [11] | Pinch Arm (B) | T | DM1H, DM8H-1, DM8H-2 | *(P-3) | |
| [13] | [12] | Pinch Arm (A) Assembly | T | DM1H, DM8H-1, DM8H-2 | | |
| [14] | [14] | FE Head | T | DM1H, DM9H | (S-5) | |
| [15] | [15] | Prism | T | DM1H, DM9H | (S-6) | |
| [16] | [2] | Slider Shaft | T | DM10H | *(L-5) | |
| [17] | [16] | C Drive Lever (SP) | T | DM10H | | |
| [18] | [16] | C Drive Lever (TU) | T | DM10H | (S-7), *(P-4) | |
| [19] | [19] | Capstan Motor | B | DM2H, DM11H | 3(S-8), Cap Belt | |
| [20] | [20] | Clutch Assembly (HI) | B | DM2H, DM12H | (C-1) | |
| [21] | [20] | Center Gear | B | DM12H | | |
| *[22] | [22] | F Brake Assembly (HI) | B | DM2H, DM12H | *(L-6) | |
| [23] | [22] | Worm Holder | B | DM2H, DM13H-1 | (S-9), *(L-7), *(L-8) | |
| [24] | [22] | Pulley Assembly (HI) | B | DM2H, DM13H-1 | | |
| [25] | [25] | Mode Gear (LM) | B | DM2H, DM13H-1 | (C-2) | |
| [26] | [20],[25] | Mode Lever (HI) | B | DM2H, DM13H-1, DM13H-2 | (C-3) | |
| [27] | [22],[23], [26] | Cam Gear (A) (HI) | B | DM2H, DM13H-1, DM13H-2 | (C-4) | (+)Refer to Alignment Sec.Page 2-5-1 |
| [28] | [26] | TR Gear C | B | DM2H, DM13H-1 | (C-5) | |
| [29] | [28] | TR Gear Spring | B | DM13H-1 | | |
| [30] | [29] | TR Gear A/B | B | DM13H-1 | | |
| [31] | [31] | FF Arm (HI) | B | DM1H, DM14H | | |
| [32] | [26] | Idler Assembly (HI) | B | DM1H, DM14H | *(L-9) | |
| [33] | [26] | BT Arm | B | DM2H, DM14H | *(P-5) | |

| STEP /LOC. No. | START-ING No. | PART | | REMOVAL | | INSTALLATION |
|---|---|---|---|---|---|---|
| | | | | Fig. No. | REMOVE/*UNHOOK/ UNLOCK/RELEASE/ UNPLUG/DESOLDER | ADJUSTMENT CONDITION |
| [34] | [26] | Loading Arm (SP) Assembly | B | DM2H, DM14H | | (+)Refer to Alignment Sec.Page 2-5-1 |
| [35] | [34] | Loading Arm (TU) Assembly | B | DM2H, DM14H | | (+)Refer to Alignment Sec.Page 2-5-1 |
| [36] | [16],[26] | M Brake (TU) Assembly (HI) | T | DM1H, DM15H | | |
| [37] | [2],[26] | M Brake (SP) Assembly (HI) | T | DM1H, DM15H | *(P-6) | |
| [38] | [37] | Tension Lever Assembly | T | DM1H, DM15H | | |
| [39] | [38] | T Lever Holder | T | DM15H | *(L-10) | |
| [40] | [40] | M Gear (HI) | T | DM1H, DM15H | (C-6) | |
| [41] | [15],[40] | Sensor Gear (HI) | T | DM1H, DM15H | (C-7) | |
| [42] | [36],[40] | Reel T | T | DM1H, DM15H | | |
| [43] | [38] | Reel S | T | DM1H, DM15H | | |
| [44] | [34],[38] | Moving Guide S Preparation | T | DM1H, DM16H | (S-11), Slide Plate | |
| [45] | [35] | Moving Guide T Preparation | T | DM1H, DM16H | | |
| [46] | [19] | TG Post Assembly | T | DM1H, DM16H | *(L-11) | |
| [47] | [27] | Rack Assembly | R | DM17H | | (+)Refer to Alignment Sec.Page 2-5-1 |
| [48] | [47] | F Door Opener | R | DM17H | | |
| [49] | [49] | Cleaner Assembly | T | DM1H, DM6H | | |
| [50] | [49] | CL Post | T | DM6H | *(L-12) | |
| ↓ (1) | ↓ (2) | ↓ (3) | ↓ (4) | ↓ (5) | ↓ (6) | ↓ (7) |

(1): Follow steps in sequence. When reassembling, follow the steps in reverse order.
These numbers are also used as identification (location) No. of parts in the figures.

(2): Indicates the part to start disassembling with in order to disassemble the part in column (1).

(3): Name of the part

(4): Location of the part: T=Top B=Bottom R=Right L=Left

(5): Figure Number

(6): Identification of parts to be removed, unhooked, unlocked, released, unplugged, unclamped, or desoldered.
P=Spring, W=Washer, C=Cut Washer, S=Screw, *=Unhook, Unlock, Release, Unplug, or Desolder
e.g., 2(L-2) = two Locking Tabs (L-2).

(7): Adjustment Information for Installation
(+):Refer to Deck Exploded Views for lubrication.

.

*** [ 22 ] F Brake Assembly (HI) is not used in 2 head model.**

## Top View

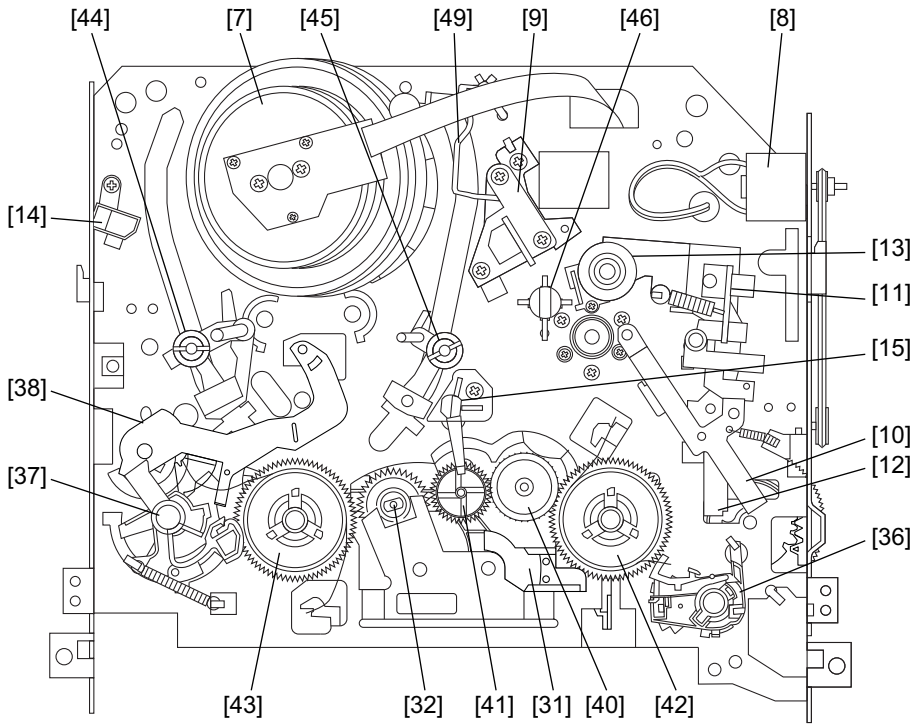



**Fig. DM1H**

## Bottom View

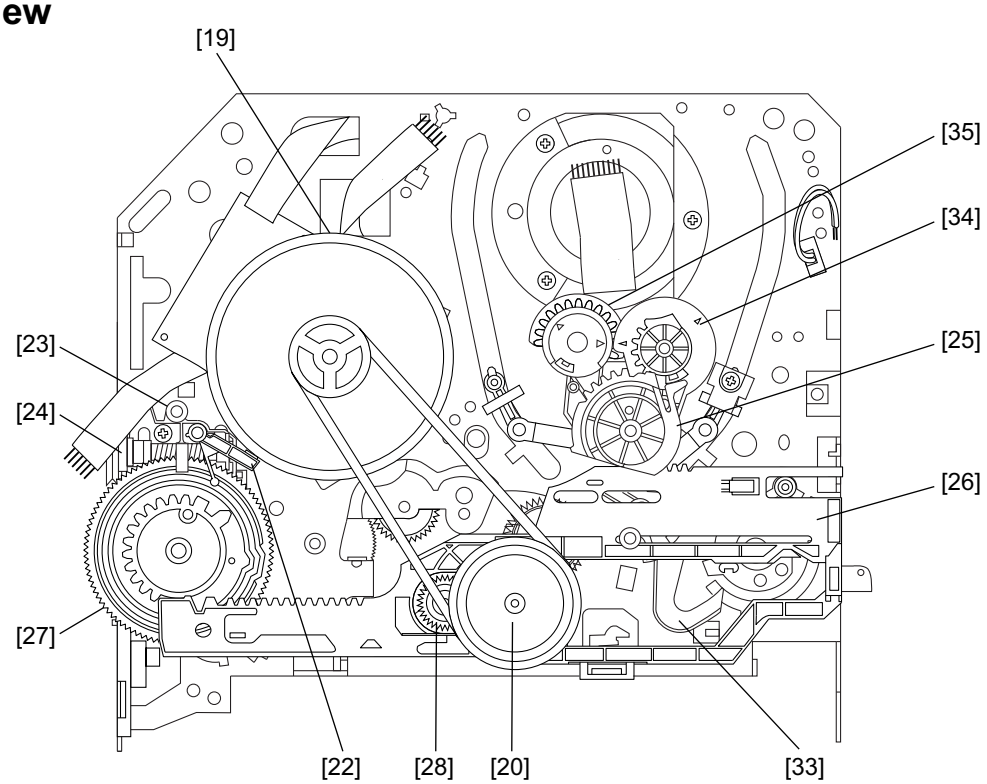



**Fig. DM2H**

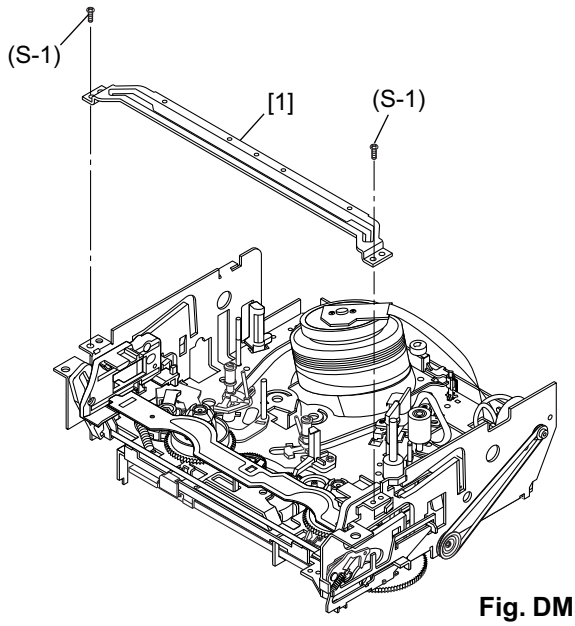
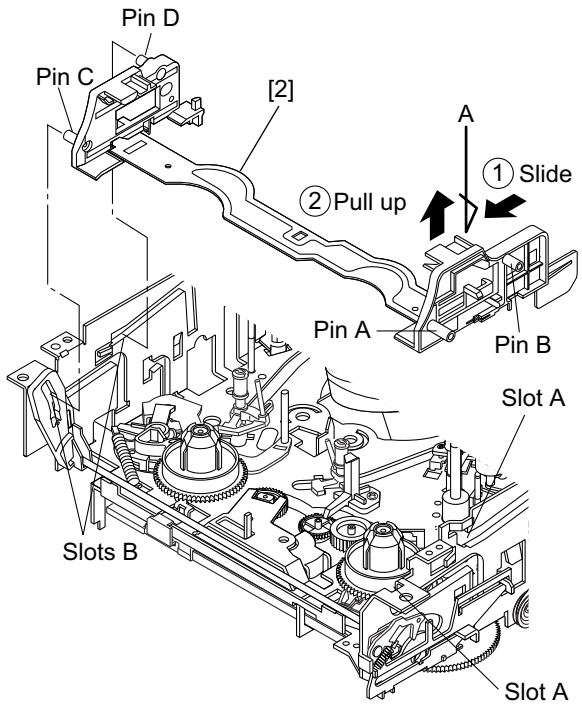



**Fig. DM3H**




First, while pushing the locking tab as shown in the right, slide and pull up the right side on [2] to release Pin A and Pin B from the slots A.
Then, remove Pin C and Pin D on [2] from the slots B as shown.

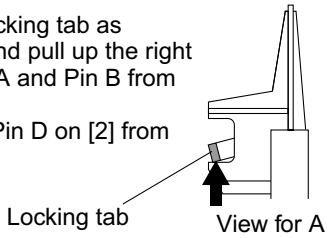
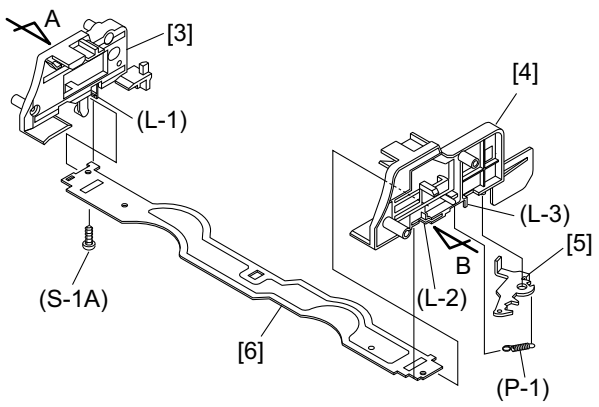
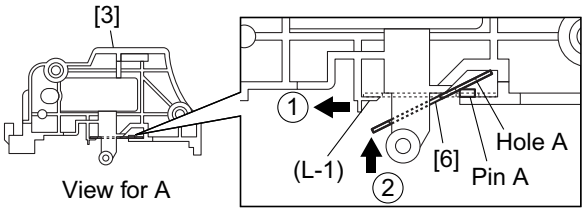



**Fig. DM4H**




## Installation of [3] and [6]

First, insert [6] diagonally in [3] as shown below. Then, install [6] in [3] while pushing (L-1) in the direction of the arrow. After installing [6] in [3], confirm that pin A of [3] enters hole A of [6] properly.




## Installation of [4] and [6]

Install [6] in [4] while pulling (L-2) in the direction of the arrow. After installing [6] in [4], confirm that pin B of [4] enters hole B of [6] properly.

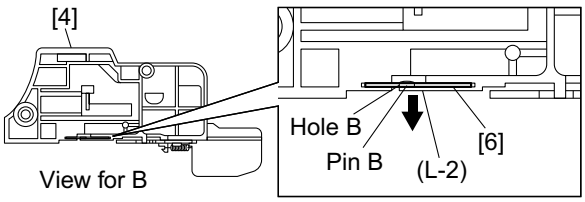



**Fig. DM5H**

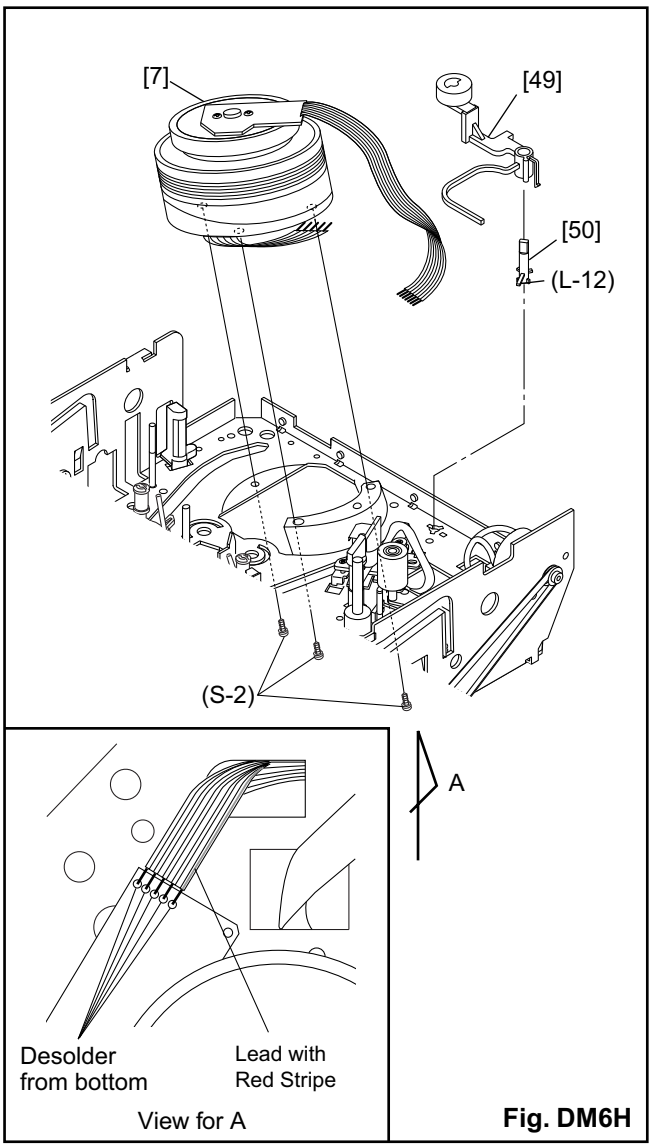



**Fig. DM6H**

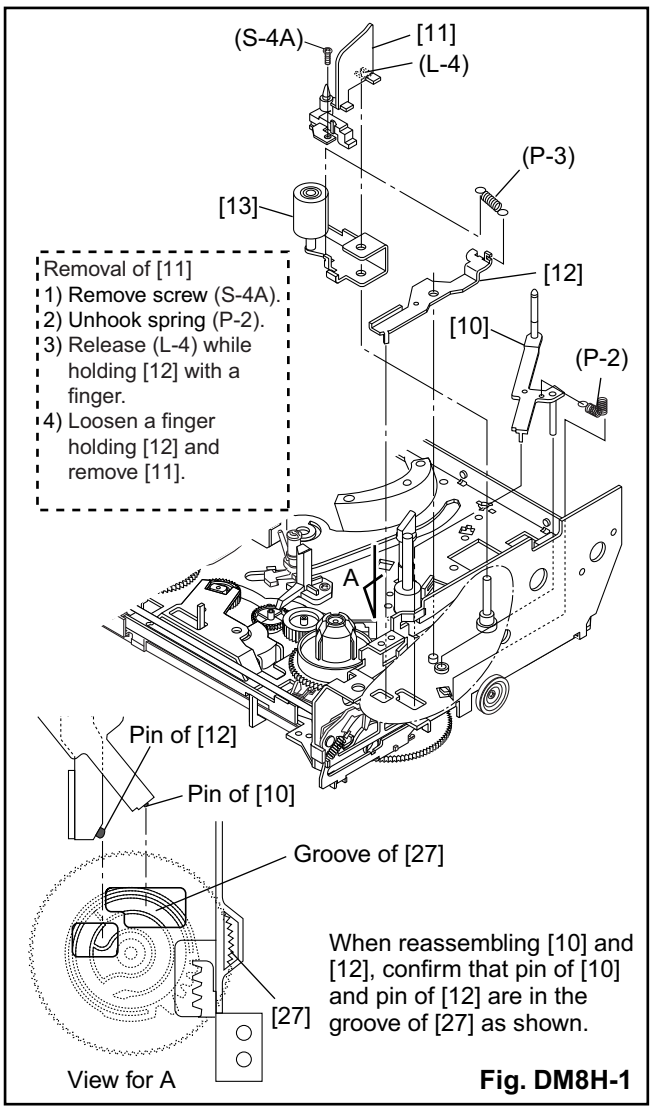



**Fig. DM8H-1**

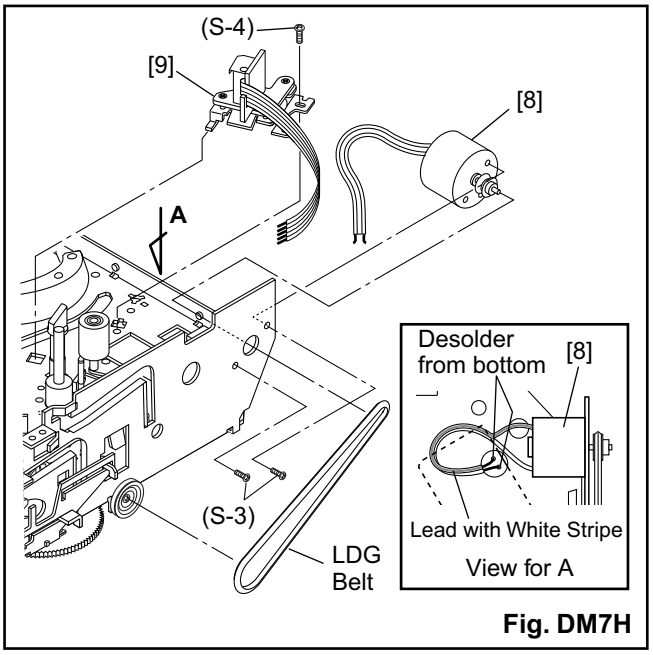



**Fig. DM7H**

## Installation of [13] and [12]

Hook spring (P-3) up to [12] and [13], then install them to the specified position so that [12] will be floated slightly while holding [12] and [13]. (Refer to Fig. A.)

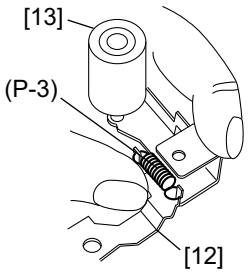



**Fig. A**

Install pin of [12] in groove of [27]. (Refer to Fig. B.)

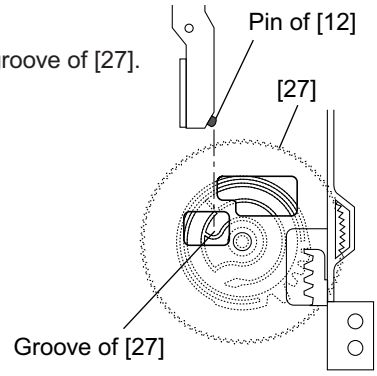



**Fig. B** (Top view)

Press both [12] and [13] till the groove of chassis pin appears, and adjust [13] to the notch of chassis. Then turn [13] a little in the direction of the arrow while pressing [12]. (Refer to Fig. C.)

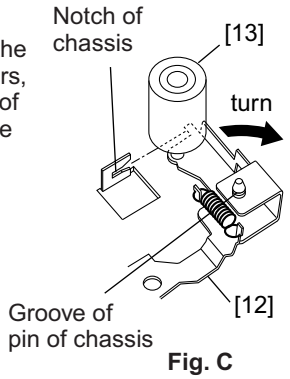



**Fig. C**

Install [11] and [10] while holding [12]. (Refer to Fig. DM8H-1.)

**Fig. DM8H-2**

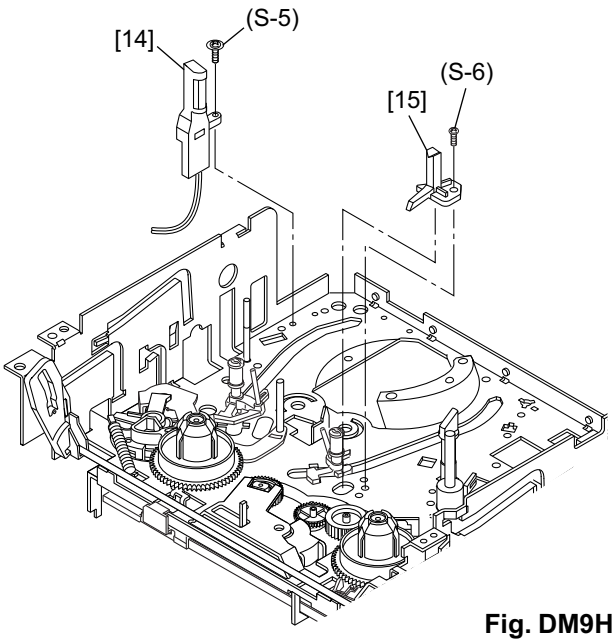



**Fig. DM9H**

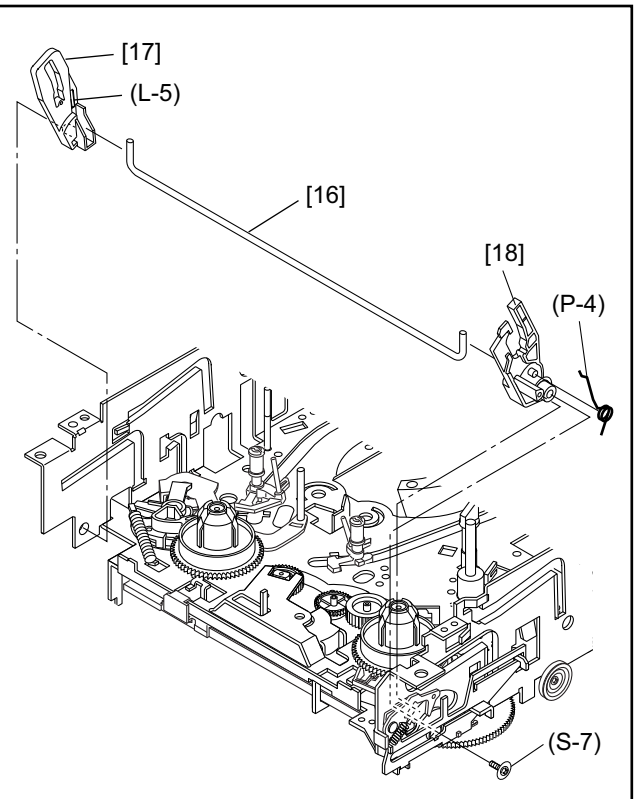
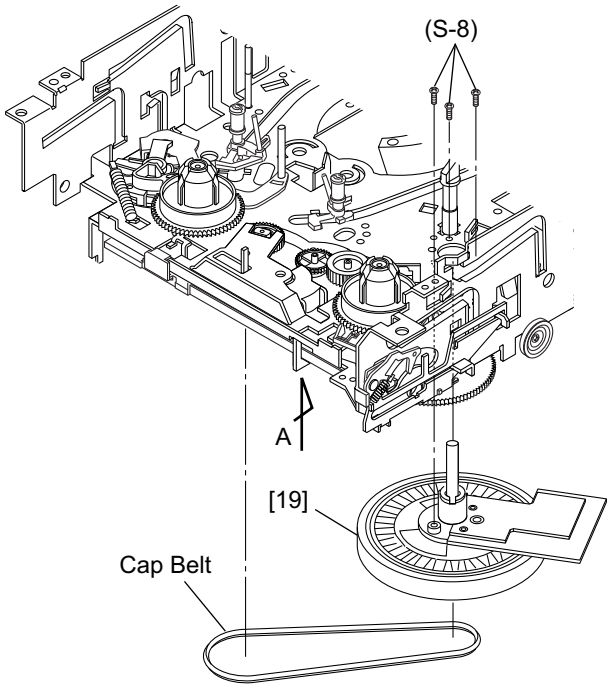



**Fig. DM10H**



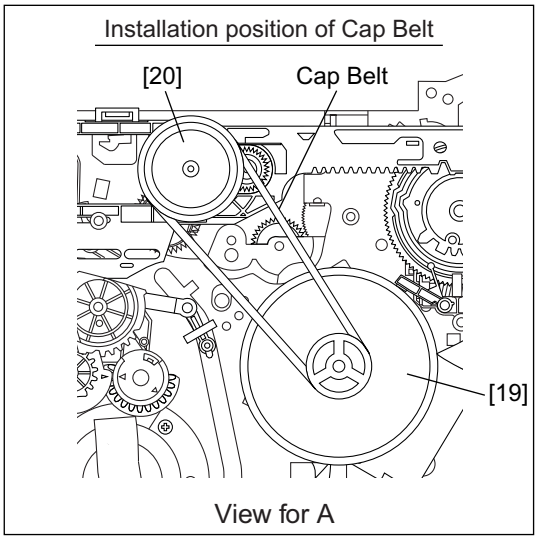
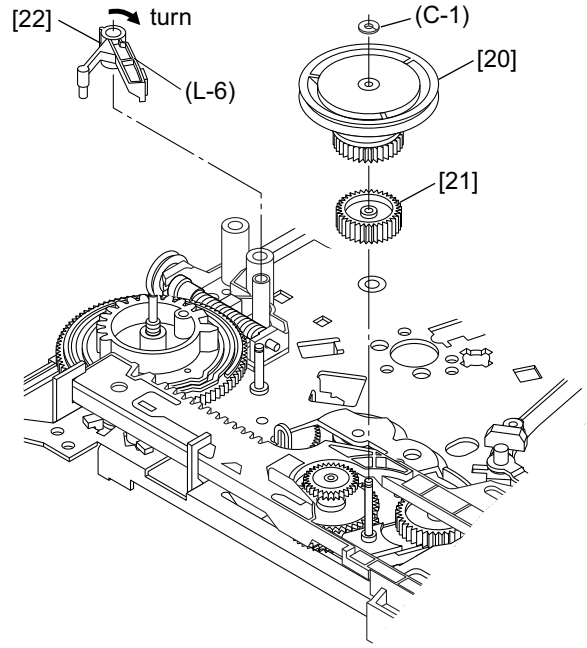




**Fig. DM11H**



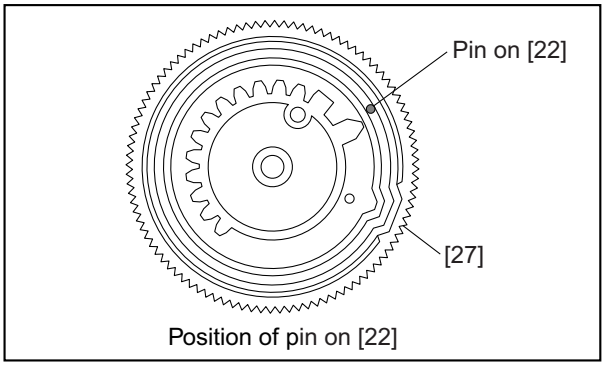




**Fig. DM12H**

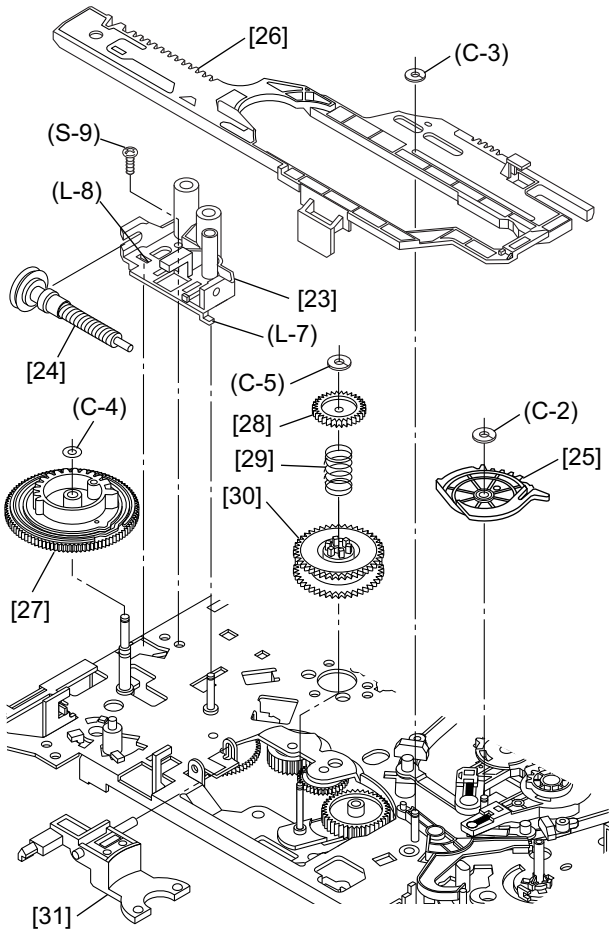
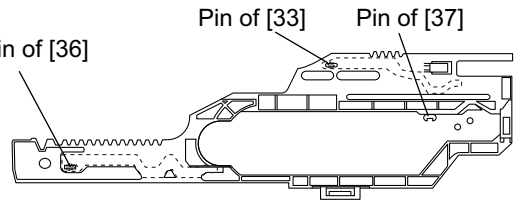
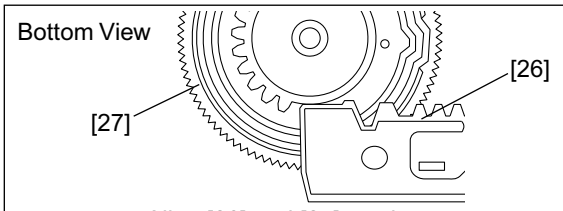



**Fig. DM13H-1**

## Installation of [26]

Position of Mode Lever when installed




Align [26] and [27] as shown.

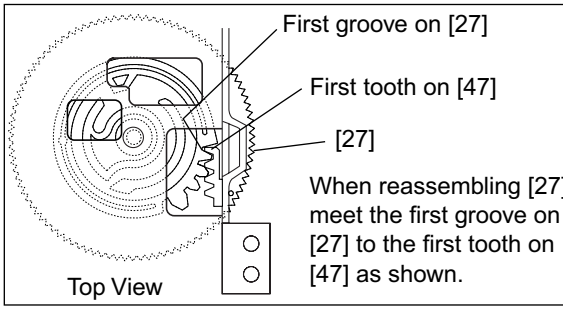

First groove on [27]
First tooth on [47]
[27]
When reassembling [27], meet the first groove on [27] to the first tooth on [47] as shown.
Top View

**Fig. DM13H-2**

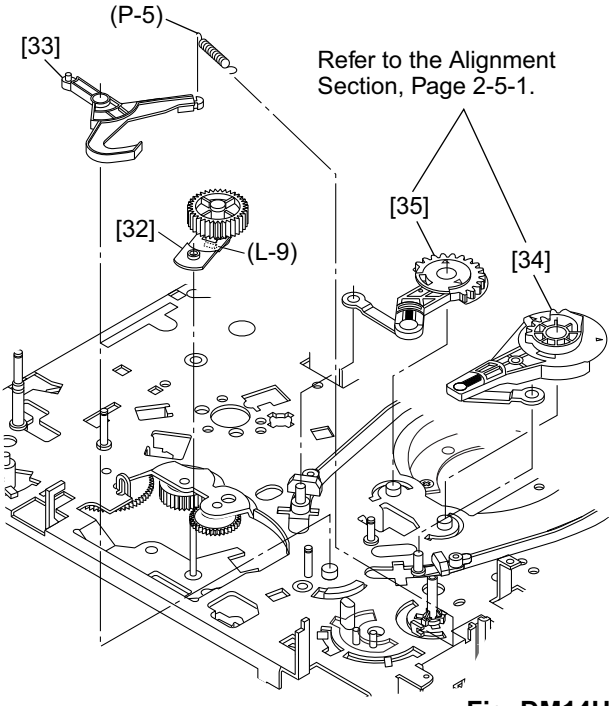



**Fig. DM14H**

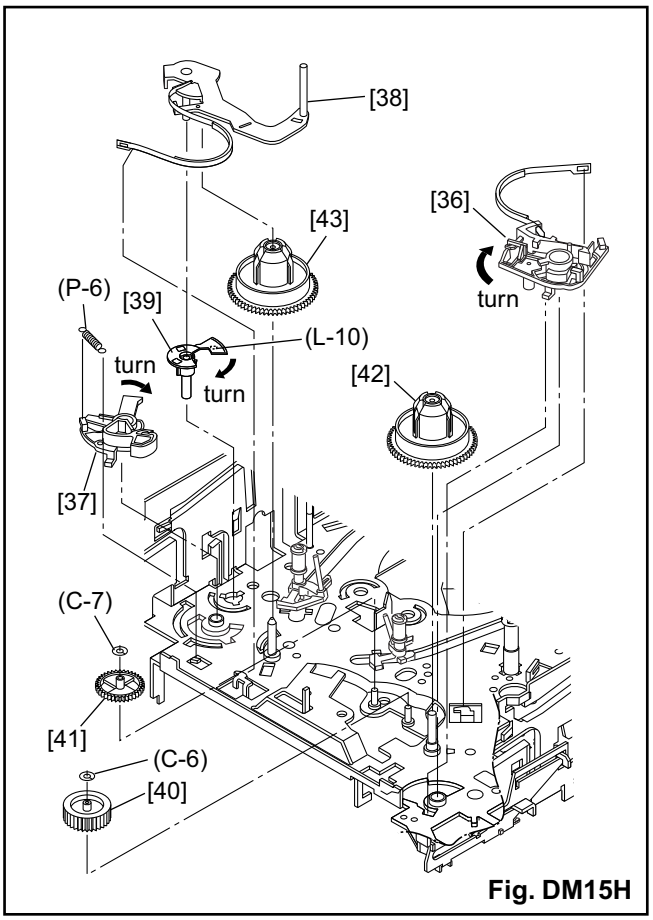


Fig. DM15H

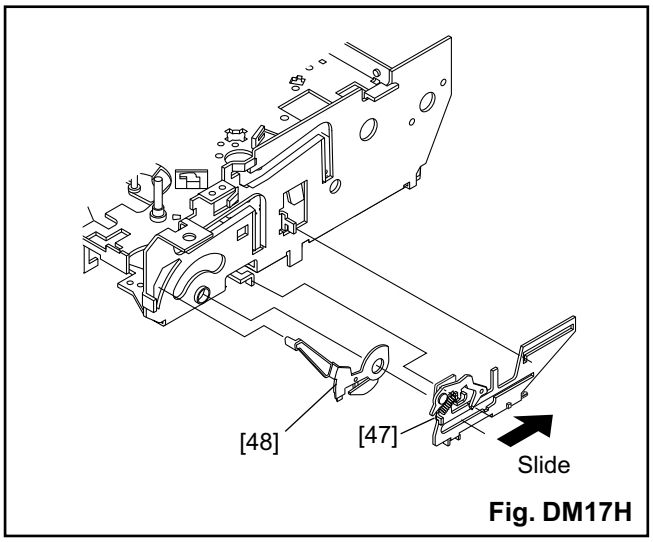


Fig. DM17H

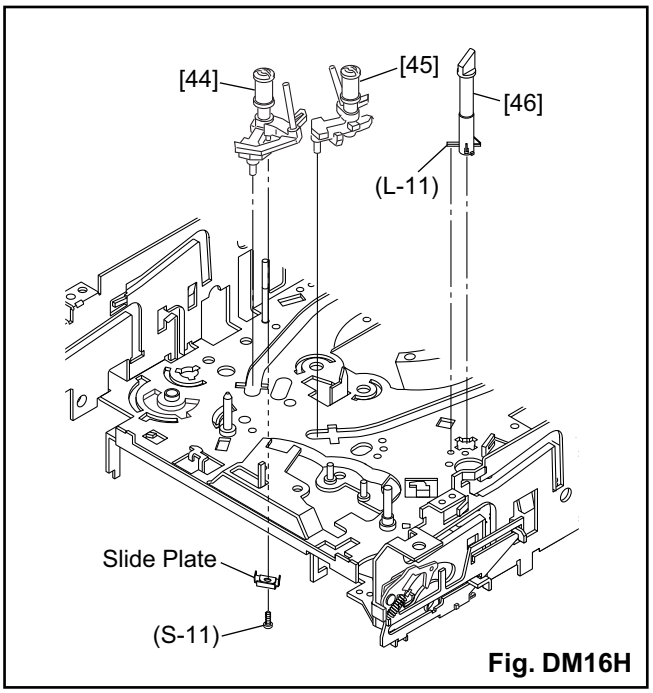


Fig. DM16H

# ALIGNMENT PROCEDURES OF MECHANISM

The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Switch, it is essential that the correct relationship between individual gears and levers be maintained.

**All alignments are to be performed with the mechanism in Eject mode,** in the sequence given. Each procedure assumes that all previous procedures have been completed.

**IMPORTANT:**

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

## Alignment points in Eject Position

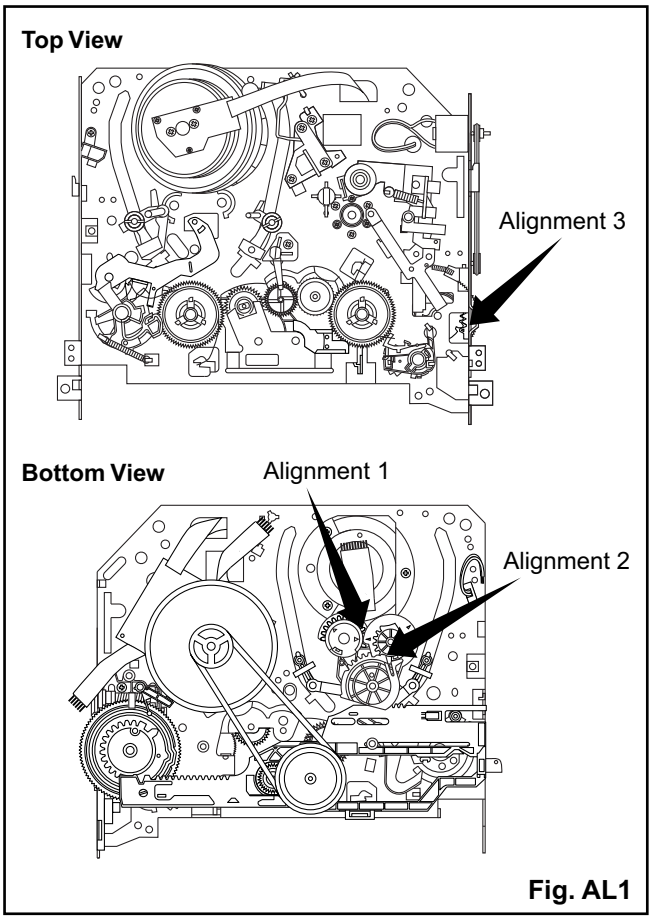



**Fig. AL1**

Alignment 1

## Loading Arm (SP) and (TU) Assembly

Install Loading Arm (SP) and (TU) Assembly so that their triangle marks point to each other as shown in Fig. AL2.

Alignment 2

## Mode Gear

Keeping the two triangles pointing at each other, install the Loading Arm (SP) Assembly so that the last tooth of the gear meets the most inside teeth of the Mode Gear. See Fig. AL2.

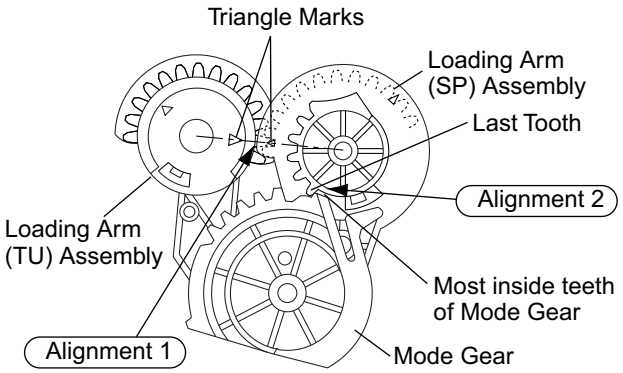



**Fig. AL2**

Alignment 3

## Cam Gear (A) (HI), Rack Assembly

Install the Rack Assembly so that the first tooth on the gear of the Rack Assembly meets the first groove on the Cam Gear (A) (HI) as shown in Fig. AL3.

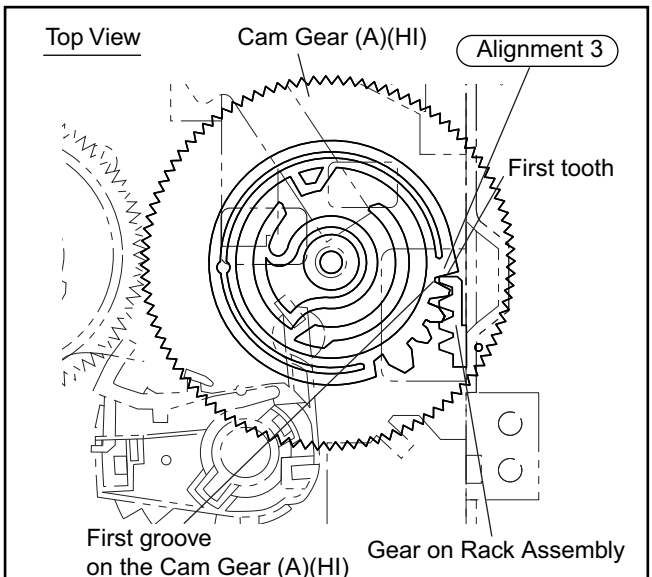
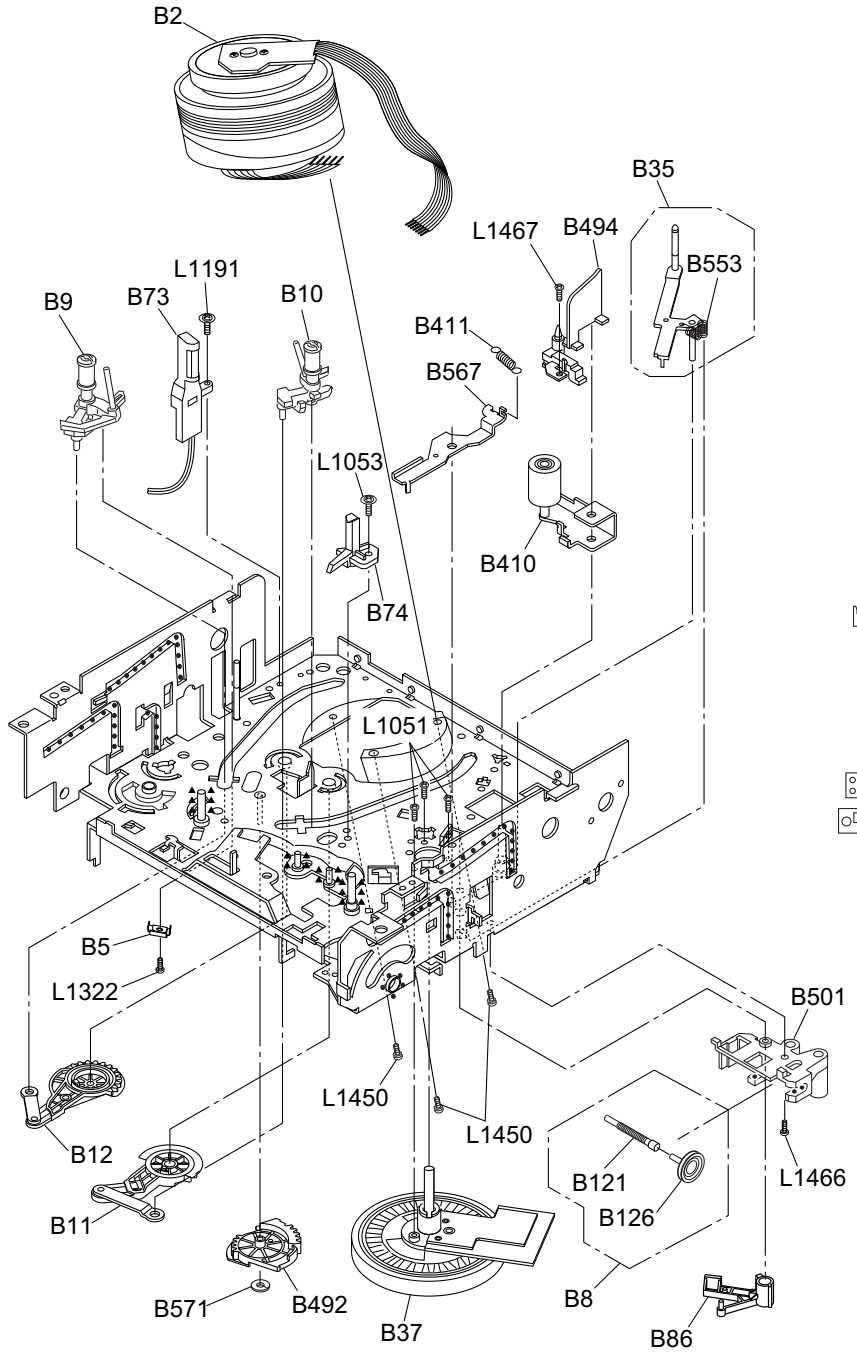


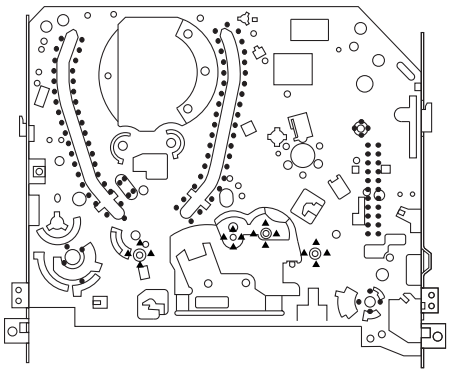

**Fig. AL3**

# DECK EXPLODED VIEWS

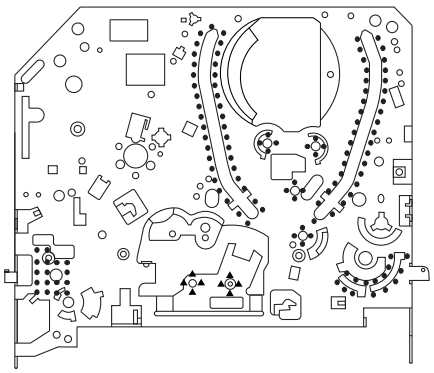
## Deck Mechanism View 1

| Mark | Description |
|---|---|
| ●●●●● | Floil G-684G or Multemp MH-D (Blue grease) |
| ▲▲▲▲▲ | SLIDUS OIL #150 |



Chassis Assembly
Top View (Lubricating Point)

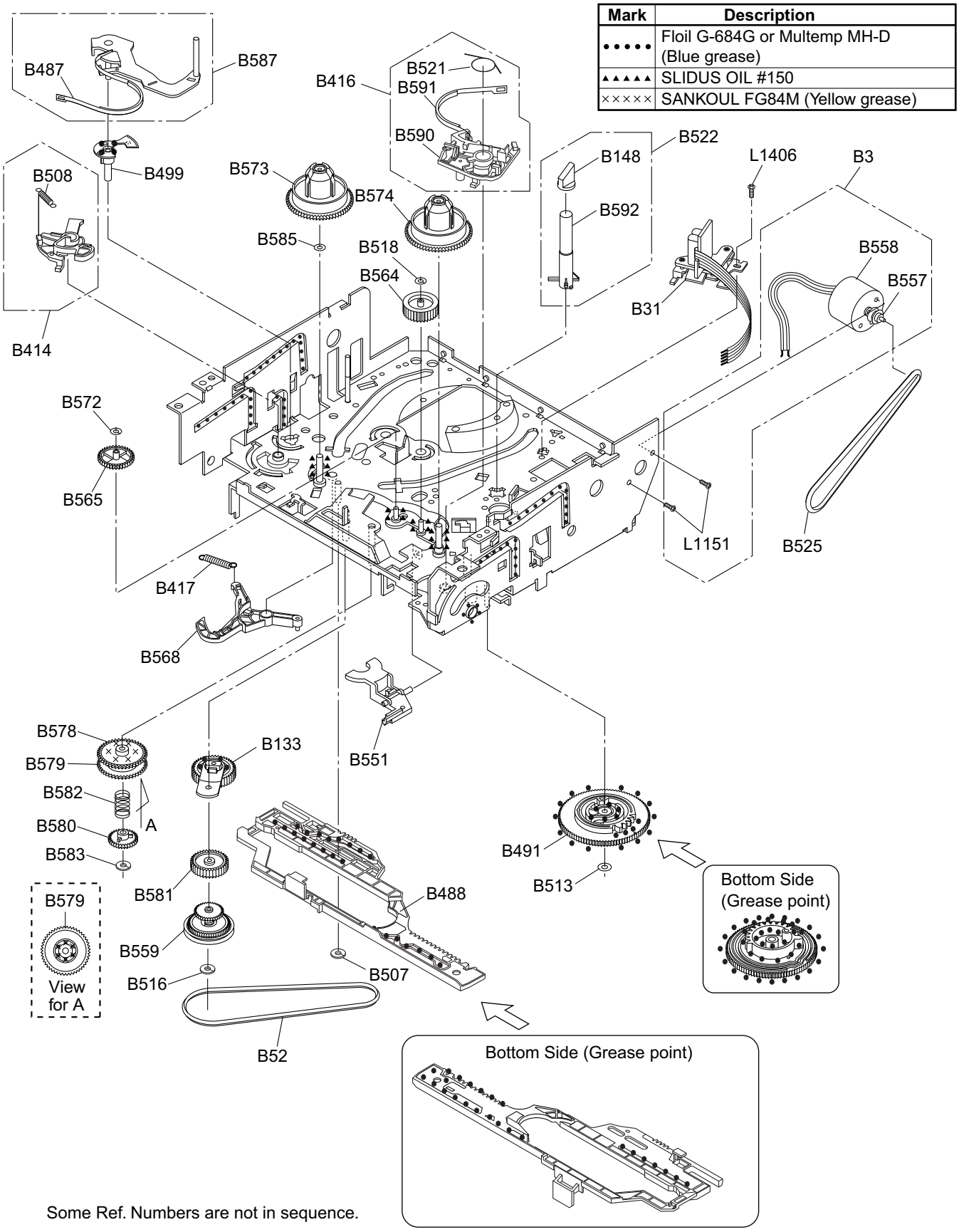


Chassis Assembly
Bottom View (Lubricating Point)

Some Ref. Numbers are not in sequence.

# Deck Mechanism View 2

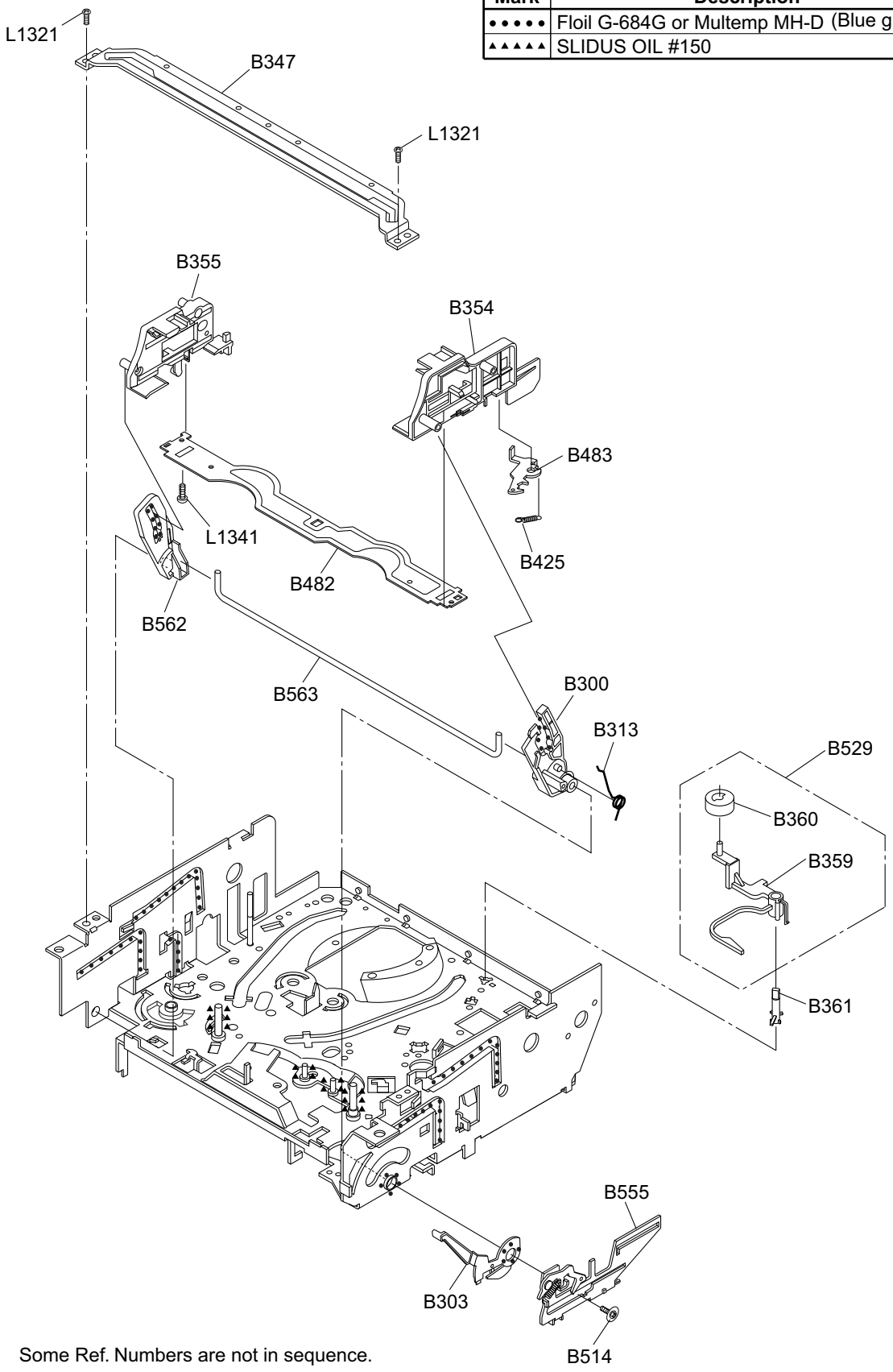
| Mark | Description |
|---|---|
| ●●●●● | Floil G-684G or Multemp MH-D (Blue grease) |
| ▲▲▲▲▲ | SLIDUS OIL #150 |
| ×××××| SANKOUL FG84M (Yellow grease) |




Some Ref. Numbers are not in sequence.

# Deck Mechanism View 3

| Mark | Description |
|---|---|
| ●●●●● | Floil G-684G or Multemp MH-D (Blue grease) |
| ▲▲▲▲▲ | SLIDUS OIL #150 |




Some Ref. Numbers are not in sequence.

# DECK PARTS LIST

| ⚠ | Location No. | Mark | TSB P/N | Reference No. | Description |
|---|---|---|---|---|---|
| | B2 | | P000468620 | 1VSA14761 | CYLINDER ASSEMBLY(N236C) MK14 PAL 6HD |
| | B3 | | P000468180 | 1VSA12912 | LOADING MOTOR ASSEMBLY MK14 |
| | B5 | | P000467990 | 0VM416429 | SLIDE PLATE MK12.5 |
| | B8 | | | 0VSA13501 | PULLEY ASSEMBLY(HI) MK12 |
| | B9 | | P000468130 | 1VSA12887 | MOVING GUIDE S P.P MK12.5 |
| | B10 | | P000468120 | 1VSA12886 | MOVING GUIDE T P.P MK12.5 |
| | B11 | | P000468100 | 1VSA12880 | LOADING ARM(TU) ASSEMBLY MK12 |
| | B12 | | P000468090 | 1VSA12879 | LOADING ARM(SP) ASSEMBLY MK12 |
| | B31 | | P000468140 | 1VSA12888 | AC HEAD ASSEMBLY MK12.5 |
| | B35 | | P000468150 | 1VSA12889 | TAPE GUIDE ARM ASSEMBLY MK12.5 |
| | B37 | | P000468630 | 1VSA14833 | CAPSTAN MOTOR HI(N9688) 288/VCZC1301 |
| | B52 | | P000467850 | 0VM411138 | CAP BELT MK10 |
| | B73 | | P000468190 | DHVEC01AL007 | FE HEAD(MK12) HVFHP0047A |
| | B74 | | P000467540 | 0VM202870 | PRISM MK10 |
| | B86 | | P000468010 | 0VSA13447 | F BRAKE ASSEMBLY(HI) MK12 |
| | B121 | | P000467900 | 0VM414091 | WORM MK12 |
| | B126 | | P000467940 | 0VM414330B | PULLEY MK12 |
| | B133 | | P000468170 | 1VSA12903 | IDLER ASSEMBLY(HI) MK12 |
| | B148 | | P000467780 | 0VM407664C | TG CAP MK6 |
| | B300 | | P000467610 | 0VM203773 | C DRIVE LEVER(TU) MK12 |
| | B303 | | P000467570 | 0VM203751C | F DOOR OPENER MK12 |
| | B313 | | P000467920 | 0VM414145 | C DRIVE SPRING MK12 |
| | B347 | | P000467650 | 0VM304920 | GUIDE HOLDER A MK10 |
| | B354 | | P000467500 | 0VM101172F | SLIDER(TU) MK12 |
| | B355 | | P000467520 | 0VM101182K | SLIDER(SP) MK12 |
| | B359 | | P000467630 | 0VM304413 | CLEANER LEVER MK10 |
| | B360 | | P000467800 | 0VM410032C | CLEANER ROLLER MK9 |
| | B361 | | P000467840 | 0VM411114 | CL POST MK10 |
| | B410 | | P000468110 | 1VSA12881 | PINCH ARM(A) ASSEMBLY(5) MK12 |
| | B411 | | P000467950 | 0VM414644 | PINCH SPRING MK12 |
| | B414 | | P000468030 | 0VSA13655 | M BRAKE(SP) ASSEMBLY(HI) MK12 |
| | B416 | | | 0VSA13449 | M BRAKE(TU) ASSEMBLY(HI) MK12 |
| | B417 | | P000467930 | 0VM414221G | TENSION SPG(3002645) MK12.5 |
| | B425 | | P000467830 | 0VM411110 | LOCK LEVER SPRING MK10 |
| | B482 | | P000468040 | 1VM220271 | CASSETTE PLATE |
| | B483 | | P000467910 | 0VM414095 | LOCK LEVER MK12 |
| | B487 | | P000468050 | 1VM320582 | BAND BRAKE(SP) MK12.5 |
| | B488 | | P000467530 | 0VM101352 | MODE LEVER(HI) MK12.5 |
| | B491 | | P000467510 | 0VM101176G | CAM GEAR(A)(HI) MK12 |
| | B492 | | P000467620 | 0VM204236 | MODE GEAR(LM) MK12 |
| | B494 | | P000467670 | 0VM305719 | C DOOR OPENER MK12 |
| | B499 | | P000467700 | 0VM305729C | T LEVER HOLDER MK12 |
| | B501 | | P000467590 | 0VM203767 | WORM HOLDER MK12 |
| | B507 | | P000467810 | 0VM410058 | REEL WASHER MK9 5*2.1*0.5 |
| | B508 | | P000467970 | 0VM414899 | S BRAKE SPRING(HI) MK12 |
| | B513 | | P000467770 | 0VM402629A | P.S.W F 6*2.55*0.5 |
| | B514 | | | 0VM411535B | SCREW RACK MK14 |
| | B516 | | P000467810 | 0VM410058 | REEL WASHER MK9 5*2.1*0.5 |
| | B518 | | P000467790 | 0VM408485A | P.S.W CUT 1.6X4.0X0.5T |
| | B521 | | P000467980 | 0VM414943 | REV BRAKE SPG(HI) MK12 |
| | B522 | | | 0VSA11012 | TG POST ASSEMBLY MK10 |
| | B525 | | P000467880 | 0VM412804 | LDG BELT MK11 |
| | B529 | | | 0VSA11161 | CLEANER ASSEMBLY MK10 |
| | B551 | | P000467760 | 0VM306183 | FF ARM(HI) MK12 |
| | B553 | | P000467870 | 0VM412555 | REV SPRING MK11 |
| | B555 | | P000468070 | 1VSA11842 | RACK ASSEMBLY MK14 |
| | B557 | | | 0VM403205A | MOTOR PULLEY U5 |
| | B558 | | | MMDZB12MF003 | LOADING MOTOR RF-500TB-12560 |
| | B559 | | P000468020 | 0VSA13450 | CLUTCH ASSEMBLY(HI) MK12 |
| | B562 | | P000467600 | 0VM203772 | C DRIVE LEVER(SP) MK12 |
| | B563 | | P000467740 | 0VM305762B | SLIDER SHAFT MK12 |
| | B564 | | P000467720 | 0VM305755 | M GEAR(HI) MK12 |
| | B565 | | P000467730 | 0VM305756 | SENSOR GEAR(HI) MK12 |
| | B567 | | P000468160 | 1VSA12890 | PINCH ARM(B) ASSEMBLY MK12.5 |
| | B568 | | P000467690 | 0VM305728 | BT ARM MK12 |
| | B571 | | P000467790 | 0VM408485A | P.S.W CUT 1.6X4.0X0.5T |
| | B572 | | P000467790 | 0VM408485A | P.S.W CUT 1.6X4.0X0.5T |
| | B573 | | P000467560 | 0VM203436 | REEL S MK11 |
| | B574 | | P000467550 | 0VM202872C | REEL T MK10 |
| | B578 | | P000467640 | 0VM304440 | TR GEAR A MK10 |
| | B579 | | P000467750 | 0VM305900 | TR GEAR B MK12 |
| | B580 | | P000467710 | 0VM305743A | TR GEAR C MK12 |
| | B581 | | P000467660 | 0VM305081 | CENTER GEAR MK11 |
| | B582 | | P000467860 | 0VM411187C | TR GEAR SPRING MK10 |
| | B583 | | P000467960 | 0VM414741 | CAM WASHER MK12 |
| | B585 | | P000467890 | 0VM413663 | PSW(317505) MK11 |
| | B587 | | P000468080 | 1VSA12878 | TENSION LEVER ASSEMBLY MK12 |
| | B590 | | P000467580 | 0VM203752E | BRAKE ARM(TU) MK12 |
| | B591 | | P000467680 | 0VM305724C | BAND BRAKE(TU) MK12 |
| | B592 | | P000467820 | 0VM411108E | TG POST MK10 |
| | L1051 | | | GPJB9060 | SCREW B-TIGHT M2.6X6 PAN HEAD+ |
| | L1053 | | | GCJS9080 | SCREW S-TIGHT M2.6X8 WASHER HEAD+ |
| | L1151 | | | CPJ39040 | SCREW SEMS M2.6X4 PAN HEAD+ |
| | L1191 | | | GCJS9080 | SCREW S-TIGHT M2.6X8 WASHER HEAD+ |
| | L1321 | | | GBJS3060 | SCREW S-TIGHT M3X6 BIND HEAD+ |
| | L1322 | | | GBJBY040 | SCREW B-TIGHT M2.3X4 BIND HEAD+ |
| | L1341 | | | GPJP2060 | SCREW P-TIGHT M2X6 PAN HEAD+ |
| | L1406 | | | 0VM410964A | AC HEAD SCREW MK14 |
| | L1450 | | | CPJ39050 | SCREW SEMS M2.6X5 PAN HEAD+ |
| | L1466 | | | GBJS9060 | SCREW S-TIGHT M2.6X6 BIND HEAD+ |
| | L1467 | | | SCJ39050 | SCREW M2.6X5 WASHER HEAD+ |

**TOSHIBA CORPORATION**
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## Appendix: RD-XV45KE, RD-XV45KB, RD-XV45KF

## REVISION HISTORY

| REV | Date | Reason for Change |
|---|---|---|
| 1 | 04/13/07 | Changed Parts List and Exploded View due to assign the part on BOARD PW/SW as individual service part |
| 2 | 05/21/07 | Changed Parts List due to correct TSB P/N, Reference No, and Description for XTAL, Location No. X1501 |
| 3 | 07/30/07 | Changed Parts List due to correct TSB P/N, Reference No, and Description for LED, Location No. D555 |